

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 describes the existing environmental, social, and economic conditions within the project area and the environmental consequences of the alternatives under consideration. The resource area studied includes Snake River Avenue beginning at the Country Club Drive intersection and extending northward approximately two miles to the intersection of the US-12 Dike Bypass and Southway beginning at the Snake River Avenue intersection and extending east approximately 0.75 miles to the 8th Street Intersection. The areas of potential impacts for individual environmental factors may vary and are delineated on a case-by-case basis dependent upon individual resource characteristics.

Existing conditions were identified based on literature and data file searches; coordination with local, state, and federal agency personnel; and field investigations. Additional details relating to the technical research performed in the preparation of this Environmental Assessment (EA) which are not discussed in this document are included in the project records, including the technical reports (see List of Technical Reports in Table of Contents).

3.1 LAND USE



3.1.1 Methodology

Local land use documents were reviewed including: the Lewiston Long-range Comprehensive Plan; the Open Spaces and Parks Master Plan; the Lewiston-Clarkston Waterfront Commercial, Recreation, and Tourism Plan; and zoning maps. Officials with the Lewiston planning department, the Lewis-Clark Valley Metropolitan Planning Organization (LCVMPO), and the U.S. Army Corps of Engineers (USACE) were consulted.

3.1.2 Affected Environment

Zoning Maps and General Plans

The City of Lewiston is responsible for land use planning within the project area. Current zoning maps show that land usage along both Snake River Avenue and Southway is commercial/light industrial, with medium and high density residential areas along the bluff east of Snake River Avenue that can be accessed from Southway. See Figure 3-1 (zoning map). Future land use plans indicate that no zoning changes are expected in the project area. See Figure 3-2.

Intersection Snake River Avenue and Southway Avenue, Lewiston
Environmental Assessment

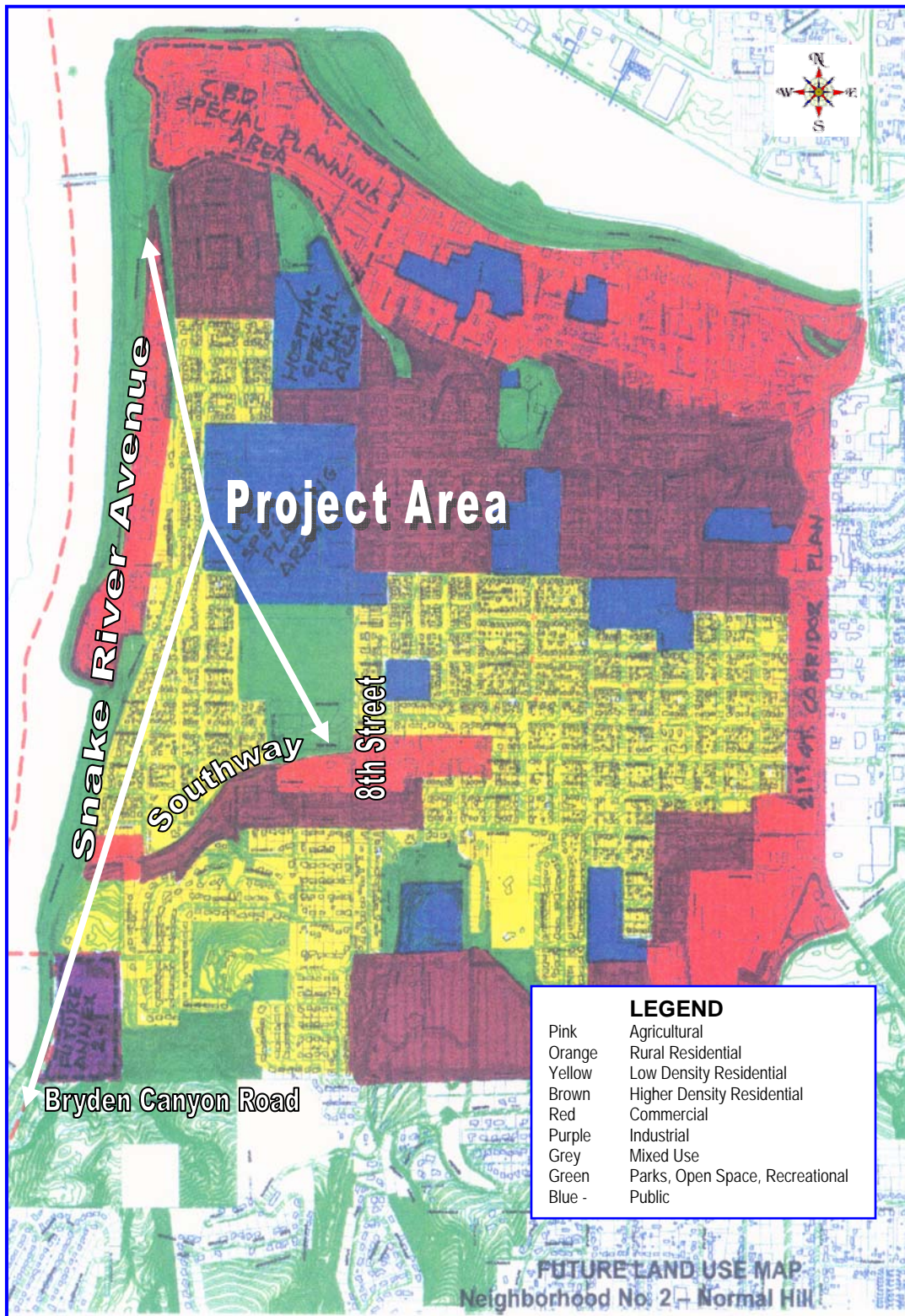


Figure 3-2. Future Land Use Map for Normal Hill Neighborhood of Lewiston, Idaho



Existing and Planned Parks and Recreational Facilities

The riverfront along the east bank of the Snake River has several existing recreational and park facilities. Kiwanis Park is located on the northern end of the project area and was built using funds from the Land and Water Conservation Fund Act (LWCFA).¹ The Levee Boat Ramp is located near the Snake River Avenue/Southway intersection. The Lewiston Levee Recreation Trail runs along the west side of Snake River Avenue and the Southway Trail runs



along the south side of Southway from 8th Street to Snake River Avenue. There is also a planned park anticipated to be located along the west side of Snake River Avenue from the southern end of the project area to the Levee Boat Ramp (just north of the Snake River Avenue/ Southway intersection), on property currently belonging to the U.S. Army Corps of Engineers (USACE). Both the USACE and Lewiston include this park in their planning documents. See Figure 1-3 in Chapter 1 – Purpose and Need. This park is intended to extend along the Snake River from Country Club Drive to the Levee Boat Ramp and include the Levee Recreation Trail, picnic shelters, fishing, etc.

3.1.3 Environmental Consequences

No-action Alternative

The No-action Alternative would have no impacts on land use or parks and recreational facilities.

Preferred Alternative

Direct Impacts

The Preferred Alternative will not cause any changes to the zoning or land use in the project area. The Preferred Alternative will have a positive impact on park and recreational facilities due to improved trail access and connectivity. An extension of the Southway Trail will be built from the southeast corner of the Snake River Avenue/Southway intersection to connect to the Lewiston Levee Recreation Trail with an improved at-grade pedestrian crossing across Snake River Avenue, an at-grade connection to Bryden Canyon Trail north of Bryden Canyon Road, and a pedestrian underpass south of Bryden Canyon Road. The project includes constructing additional parking that is needed both for Kiwanis Park and to replace the on-street parking that would be lost due to the widening of the roadway. See Figure 3-3. It also includes landscaping that will be installed along the west side of Snake River Avenue within the planned park.

¹ 16 U.S.C. §§ 4601-4 through 4601-11 (P.L. 88-578). The Act establishes a Land and Water Conservation Fund in the U.S. Treasury to subsidize state and federal acquisition of lands and waters for recreational and conservation purposes.



Figure 3-3. Proposed Improvements to Parking for Kiwanis Park

The project will use approximately 1.02 acres of land (including 0.48 acres for slope easements needed to accommodate proposed cut and fill slopes from the roadway) from the planned park due to the widening of Snake River Avenue near Bryden Canyon Road. It will also use an additional 1.30 acres for the infiltration ponds to be located within the confines of the planned park as part of the proposed improvements to the storm water drainage system and the relocation of approximately 1250 linear feet of the existing Levee Trail. There will be 0.27 acres in construction easements that will be temporary in nature. See Figure 3-4. These improvements will be a minor impact to the planned park and will not adversely affect the activities, features, or attributes of the planned park or other planned park improvements.



Figure 3-4. Potential Impacts to Planned Park

As provided in Section 6009 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), the requirements of Section 4(f) of the Department of Transportation Act of 1966, as amended, will be considered satisfied with respect to parks and recreation areas, if it is determined by FHWA (with concurrence from the officials having jurisdiction over the park or recreation area, as well as an opportunity for the public to review and comment on the proposed plans) that a transportation project will have a “de minimis² impact” on the 4(f) resource. This determination will be made by FHWA after an opportunity for public comment has been provided at the project public hearing. The Lewiston Parks Department and the USACE (both of whom have jurisdiction over the land in question) have expressed agreement with the preliminary determination as to the effect of the proposed improvements on the planned park. See letters dated November 1, 2006 and November 28, 2006, respectively, in Chapter 4 – Comments and Coordination.

Indirect Impacts

The Preferred Alternative supports existing land uses and will not influence future land use changes; therefore, it will have no indirect impacts to land use or to existing or planned parks and recreational facilities.

3.1.4 Mitigation

Section 6(f) of the LWCFA prohibits conversion of property acquired or developed with assistance from the Fund to anything other than public outdoor recreation uses. Such a conversion can only be approved with provisions for substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location. Since this project involves the conversion of a minor amount of Kiwanis Park (a Section 6(f) property) to replace lost off-street parking, additional land currently owned by the U.S. Army Corp of Engineers south of Kiwanis Park along the Snake River, equal in acreage to that intended to replace the off-street parking, will be committed to public outdoor recreation use. Also, landscaping will be provided in connection with the infiltration basins compatible with the surrounding park area.

3.2 FARMLANDS



No farmlands exist along or adjacent to either the Snake River Avenue or Southway corridors. Land usage along Southway is residential with some commercial development adjacent to the roadway. Land usage along Snake River Avenue is commercial and light industrial. Therefore, there would be no impacts to farmlands under either the No-action Alternative or the Preferred Alternative.

² “De minimis” is Latin for insignificant. See Barrons Law Dictionary 3rd Edition (1991).

3.3 SOCIAL CONDITIONS / ENVIRONMENTAL JUSTICE



3.3.1 Methodology

Impacts to the social makeup of neighborhoods adjacent to the project from the Preferred Alternative were evaluated, such as changes to community cohesion, travel patterns and accessibility, school districts, recreation areas, churches, businesses, public safety, etc. In addition, the Civil Rights Act of 1964 and Presidential Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) require an evaluation to determine if minority or low-income populations would be disproportionately and adversely impacted by the project.

Population characteristics of neighborhoods adjacent to the project, including environmental justice factors, were determined based upon the 2000 Census Data. The project area was defined as Census Tract 9904 Block Group 4 and Census Tract 9905 Block Group 1.

3.3.2 Affected Environment

Social Conditions

The project area consists of mostly commercial and light industrial properties immediately adjacent to Southway and Snake River Avenue. Residential neighborhoods are within the project area both north and south of Southway on the bluff overlooking Snake River Avenue. The residential properties in these neighborhoods connect to local streets and do not have direct access onto either Southway or Snake River Avenue.

Selected population statistics for the Census Tract that includes the project area, Census Tracts 9904 and 9905, the City of Lewiston, Nez Perce County, and the State of Idaho are set forth in Table 3-1

Table 3-1. Selected Population Characteristics from 2000 Census Data

	Census Tract 9904 Block Group 4	Census Tract 9905 Block Group 1	City of Lewiston	Nez Perce County	State of Idaho
Total Population	3,266	3,363	37,047	37,410	1,293,953
Percent Minority	5.5%	4.2%	4.5%	8.0%	9.1%
Median Household Income	\$34,880	\$41,162	\$36,606	\$36,282	\$37,572
Mean Travel Time to Work	12.2 min	13.3 min	14.3 min	15.9 min	20.0 min
Percent age 65 or older	12.5%	19.4%	17.3%	16.8%	11.3%
Percent of population 25 or older with high school diploma or higher	87.7%	90.3%	86.2%	85.5%	84.7%

Source: U.S. Bureau of the Census, <http://factfinder.census.gov> (2000 Census, Summary Files 3 and 1 and 2000 Redistricting Data File)

As indicated in Table 3-1, the population characteristics within and adjacent to the project area is typical of the City of Lewiston and similar to Nez Perce County and the State of Idaho.



Environmental Justice

Table 3-2 demonstrates the percentages of minority and low-income populations in the project area, compared with the same population groups in the City of Lewiston, Nez Perce County, and the State of Idaho. As indicated in Table 3-2, there are no identified concentrations of environmental justice populations in the project area. The project area population is consistent with the racial and economic makeup of the surrounding areas.

Table 3-2. Population Characteristics Relating to Environmental Justice.

	Total Population	Percent Minority	Median Household Income	Percent Individuals Below Poverty Level	Percent Households Below Poverty Level
Project Area	1,727	4.8%	NA	10.3%	NA
Census Tract 9904	3,266	5.5%	\$34,880	12.1%	10.1%
Census Tract 9905	3,363	4.2%	\$41,162	9.6%	5.5%
City of Lewiston	31,047	4.5%	\$36,606	12.0%	12.7%
Nez Perce County	37,410	8.0%	\$36,282	12.2%	12.5%
State of Idaho	1,293,953	9.1%	\$37,572	11.8%	11.2%

Source: U.S. Bureau of the Census, <http://factfinder.census.gov> (2000 Census, Summary File 3 and 1)

3.3.3 Environmental Consequences

No-action Alternative

The No-action Alternative would have a minor impact on social conditions in the project area due to increased congestion affecting travel and commuting times. As this impact would affect all roadway users equally, it would not disproportionately impact minority or low-income populations.

Preferred Alternative

Direct Impacts

Social

The impact on social conditions from the Preferred Alternative will be very minor. The project will:

- Upgrade existing major streets, but will not result in any change to existing neighborhoods or affect community cohesion. No residents or businesses will be displaced or relocated, nor will it cause changes in the current boundaries of schools, churches, or similar organizations.

- Close Prospect Avenue access to Southway, which will cause a minor change in traffic patterns. Currently, 200 vehicles/day (100 vehicles/day in each direction) use Prospect Avenue. Most of this traffic will access the neighborhood along Prospect Avenue using 1st Street and 16th, 17th, 18th, or 19th Street. Spreading the 200 vehicles/day currently using the closed portion of Prospect Avenue onto these streets will result in a small increase in traffic on each of these streets. Some of the traffic currently using Prospect Avenue as an alternate to Snake River Avenue will be discouraged from traveling on these neighborhood streets.
- Improve safety by providing sidewalks throughout the project area, by improving traffic capacity, and by closing the Southway/Prospect Avenue intersection.

Environmental Justice

No minority or low-income populations have been identified that would be adversely impacted by the proposed project. Therefore, this project is not subject to the provisions of Executive Order 12898.

Indirect Impacts

There will be no indirect impacts on social conditions or environmental justice populations in the project area from the Preferred Alternative.

3.3.4 Mitigation

No mitigation is proposed.

3.4 RELOCATIONS



The project has been specifically designed so that there would be no displacements from the Preferred Alternative through the use of minimum lane widths for the travel lanes on Snake River Avenue from 11th Avenue to the US-12 Dike Bypass and the elimination of parkstrips where necessary to avoid impacting the adjacent properties.

3.5 ECONOMIC CONDITIONS



3.5.1 Methodology

Field surveys, 2000 Census data, and consultation with local residents and business owners were used to determine the characteristics and needs of the local economy.

3.5.2 Affected Environment

Economic conditions in the area are dependent upon continued access from Snake River Avenue and Southway. The businesses along Snake River Avenue consist of industrial and recreational enterprises (such as boat sales and services, manufacturing, and agricultural cooperatives), while the businesses along Southway consist more of retail and professional services (such as medical, veterinary, and financial services) and fast food establishments.

3.5.3 Environmental Consequences

No-Action Alternative

Under the No-action Alternative, there would be no changes to the economic conditions and trends that currently exist in the project area. Traffic congestion would continue to increase with the anticipated growth in travel demand, which would hamper access to the various businesses in the project area due to the lack of a center turn lane.

Preferred Alternative

Direct Impacts

The Preferred Alternative will result in the loss of on-street parking along Snake River Avenue north of 11th Avenue, but there will be a benefit to businesses in the area from the addition of a center turn lane to allow easier business access and additional parking at Kiwanis Park. Adding sidewalks and curb and gutter along the corridors limits the locations where parking lots can be accessed, but it increases safety by establishing defined driveways for parking lots. One business access on the north side of Southway near the Snake River Avenue intersection (American Insurance) will be modified to a right-in/right-out to help reduce the traffic conflicts and increase safety at the intersection.

Indirect Impacts

There will be no indirect impacts from the Preferred Alternative.

3.5.3 Mitigation

Access to all businesses in the project area will be maintained during construction. Also, the proposed improved parking at Kiwanis Park will be available for business and commercial patrons during business hours.

3.6 PEDESTRIANS AND BICYCLISTS



3.6.1 Methodology

State and local bicycle/pedestrian plans were reviewed and officials with the Lewiston planning department and the Lewiston Clarkston Valley Metropolitan Planning Organization (LCVMPO) were consulted. Site visits were also conducted.

3.6.2 Affected Environment

Sidewalks

Currently, sidewalks exist only along the east side of Snake River Avenue from approximately 7th Avenue (or H Street) to the northern terminus of the project area. On Southway, the Southway Trail that runs along the south side of the roadway from the 8th Street intersection to Snake River Avenue facilitates pedestrian movements in lieu of sidewalks.

Trails

The Lewiston Levee Recreation Trail runs west of Snake River Avenue throughout the project area and the Southway Trail runs along the south side of Southway from the 8th Street intersection to Snake River Avenue, which provide pedestrian and bicycle travel.

3.6.3 Environmental Consequences

No-action Alternative

Under the No-Action Alternative, there would be no changes to the existing pedestrian and bicycle facilities.

Preferred Alternative

Direct Impacts

The Preferred Alternative will improve pedestrian facilities by providing continuous sidewalks along the east side of Snake River Avenue and the north side of Southway, which will provide a safe pathway for pedestrian travel. Access from the Southway Trail to the Lewiston Levee Recreation Trail at the Snake River Avenue/Southway intersection will be improved for both pedestrian and bicycle travel by extending the Southway Trail to connect with the Lewiston Levee Recreation Trail across Snake River Avenue, including construction of improved at-grade pedestrian crossings on all three legs of the Snake River Avenue/Southway intersection. A connection between the Levee Recreation Trail and the Bryden Canyon Trail will be provided at Bryden Canyon Road by way of an underpass south of Bryden Canyon Road and at-grade pedestrian crossings just north of Bryden Canyon Road, at the US-12 Dike Bypass, and at 11th Avenue. See Figure 3-5.

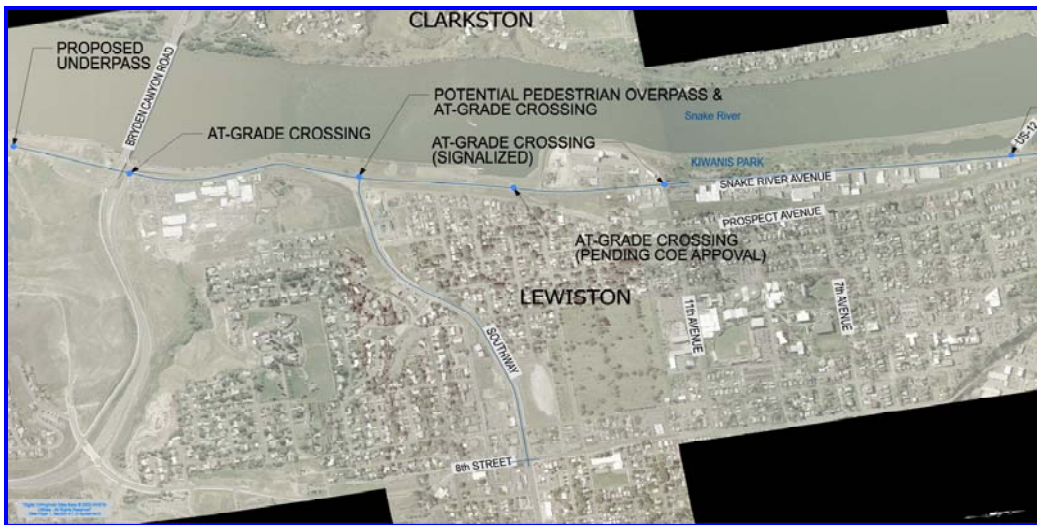


Figure 3-5. Proposed Improvements to Pedestrian and Bicycle Facilities

Indirect Impacts

There will be no indirect impacts from the proposed project.

3.7 AIR QUALITY



3.7.1 Methodology

NAAQS Pollutants

The Clean Air Act Amendments (CAAA) of 1990 require that all areas which have recorded violations of the National Ambient Air Quality Standards (NAAQS) for specified air pollutants be designated as non-attainment areas. Further, the Idaho Department of Environmental Quality (IDEQ) has identified certain geographical areas that are classified as “areas of concern” for air quality for both carbon monoxide (CO) and particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM₁₀).

Roadway projects are screened to identify those that, based on their type, configuration, and projected traffic volume, will not result in emission concentrations approaching or exceeding the NAAQS, based on satisfying one or more of the following identified screening criteria:

- Project types identified as being exempt from air quality analysis per 40 CFR 93.126 (applicable to both CO and PM₁₀)
- Projects for which the design year traffic volume will result in an operational level of service (LOS) of “C” or better for all intersections in or directly affected by the project (applicable to CO only)
- Projects for which the design year two-way 24-hour forecast traffic volume for any roadway in or directly affected by the project does not exceed 15,000 vpd for the areas of the state outside North Ada County (applicable to CO only)
- In accordance with PM₁₀ and PM_{2.5} Hot Spot Analysis Final Rule published March 10, 2006, projects which do not have a significant number of diesel vehicles, have intersections operating lower than LOS C with a significant number of diesel vehicles, bus or rail terminals that have a significant number of diesel vehicles congregating at a single point, or affect areas identified as sites of violations in an implementation plan (applicable to PM₁₀ only)³

Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), there are also regulations for air toxics. Most air toxics originate from human-made sources, including on-road mobile sources (vehicles), non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries). Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion

³ 40 C.F.R. §193.123

products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. The Environmental Protection Agency (EPA) is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs.

FHWA issued Interim Guidance on Air Toxic Analysis in NEPA Documents on February 3, 2006, which provided guidance on when and how to analyze MSATs. This EA includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable the prediction of project-specific health impacts of the emission changes associated with the alternatives in this EA.

In this document, FHWA has provided a qualitative assessment of MSAT emissions relative to the various alternatives, and has acknowledged that the Preferred Alternative may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain. Because of this uncertainty, the health effects from these emissions cannot be estimated.

3.7.2 Affected Environment

The project is not within a federally designated air quality area for CO or PM₁₀. The project is within an IDEQ identified air quality area of concern for CO and PM₁₀.

3.7.3 Environmental Consequences

No-action Alternative

Under the No-action Alternative, all mainline sections of both Snake River Avenue and Southway would experience traffic volumes greater than LOS D for a two-lane minor arterial. In addition, the majority of the intersections within or directly affected by the project would operate at LOS D or worse, resulting in longer traffic delays and higher CO emissions.

Preferred Alternative

Direct Impacts

NAAQS Pollutants

The Preferred Alternative is forecast to operate at levels of LOS C or better at all intersections within or directly affected by this project. According to the second of the screening criteria identified in Section 3.8.1, the Preferred Alternative will not result in emission concentrations approaching or exceeding the NAAQS. It can therefore be concluded that the Preferred Alternative will have no significant adverse impact on air quality as a result of CO emissions.

This project is in a PM₁₀ area of concern, but is not of the type listed in 40 CFR 93.123(b)(1). The EPA has determined that projects that are not of the type listed in 40 CFR 93.123(b)(1) meet the Clean Air Act's requirements without any PM₁₀ or PM_{2.5} hot-spot analysis.

Mobile Source Air Toxics

On March 29, 2001, the EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources.⁴ This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in vehicle miles traveled (VMT), these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent. See Figure 3-6.

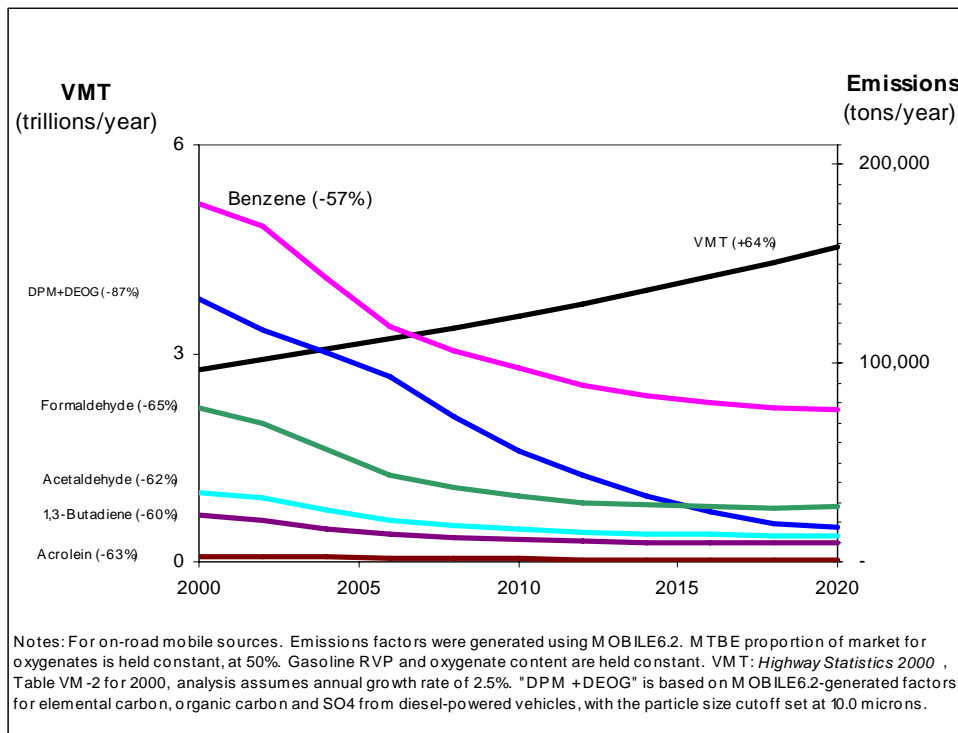


Figure 3-6. U.S. Annual Vehicle Miles Traveled vs. Mobile Source Air Toxics Emissions, 2000 – 2020

As a result, EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

Project Specific Quantitative MSAT Impact Analysis

The Council on Environmental Quality (CEQ) regulations regarding incomplete or unavailable information⁵ – Evaluating the environmental and health impacts from

⁴ 66 FR 17229

⁵ 40 CFR 1502.22(b)

MSATs on a proposed highway project would involve several key steps, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

Emissions: The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables in determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model; emission factors are projected based on a typical trip of 7.5 miles and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of particulate matter under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE 6.2 is an adequate tool for projecting emissions trends and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

Dispersion. The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The National Cooperative Highway Research Program is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a

lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the timeframes that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs – Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies. Some use epidemiological studies (frequently based on emissions levels found in occupational settings) to show a statistical association with adverse health outcomes or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level.

EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris>. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems⁶. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. FHWA cannot evaluate the validity of these studies, but more importantly, it does not provide information that would be useful to alleviate the uncertainties listed above and enable a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of Impacts Based upon Theoretical Approaches or Research Methods Generally Accepted in the Scientific Community – Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emission changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be

⁶ South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

Project Specific Qualitative MSAT Analysis

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions—if any—from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*.⁷

This project, which is on existing alignment, has a low potential for MSAT effects. The vehicle miles traveled (VMT) in 2004 was approximately 27,000 vehicle miles per day. The estimated 2020 VMT are approximately 38,000 vehicle miles per day, which is less than twice the amount of existing VMT. For projects on an existing alignment, MSATs are expected to decline (due to the effect of new EPA engine and fuel standards) unless VMT more than doubles by 2020. The highest predicted 2030 traffic volume within the project is 22,200 vpd, which is substantially less than the 150,000 vpd threshold that also may indicate a potential for MSAT concerns. See Table 3-3.

Table 3-3. Vehicle Miles Traveled

Roadway	Length (miles)	Traffic Volumes (vpd)			Vehicle Miles Traveled (VMT/day)		
		2004	2020	2030	2004	2020	2030
Snake River Avenue							
Country Club Drive to Southway	0.70	13,000	18,704	22,200	9,100	13,093	15,540
Southway to 11 th Avenue	0.60	8,800	12,458	14,700	5,280	7,475	8,820
11 th Avenue to US-12 Dike Bypass	0.60	7,700	10,924	12,900	4,620	6,554	7,740
Southway							
Snake River Avenue to 8 th Street	0.75	10,200	14,478	17,100	7,650	10,859	12,825
		Total VMT			26,650	37,981	44,925

⁷ Located at www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm

The amount of MSATs emitted for each alternative in this EA would be proportional to the VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the Preferred Alternative is the same as for the No-action Alternative, because the transportation network is not conducive to rerouting trips for traffic using Snake River Avenue and Southway. These roads will experience increasing congestion, travel speeds will be lower, and the peak travel periods will be for a longer duration, but the daily vehicle miles traveled will be the same for the Preferred Alternative and the No-action Alternative. The MSAT emissions for the preferred alternative will be less than the No-action alternative because of lower MSAT emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent of these speed-related emissions decreases cannot be reliably projected due to the inherent deficiencies of technical models.

Because the estimated VMT under each of the alternatives are the same, there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The travel lanes which are being added on the Preferred Alternative will have the effect of moving some traffic closer to nearby homes and businesses along Southway Avenue; therefore, under this alternative there may be localized areas where ambient concentrations of MSATs could be higher under than the No-action Alternative. The localized increases in MSAT concentrations would likely be most pronounced along Southway Avenue. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-action Alternative cannot be accurately quantified due to the inherent deficiencies of current models. In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Preferred Alternative could be higher relative to the No-action Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Indirect Impacts

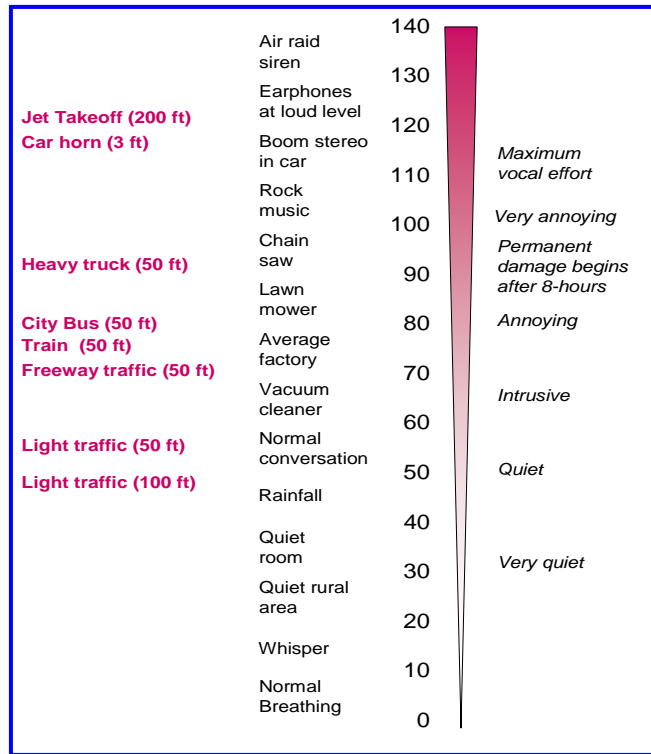
There will be no indirect impacts from the proposed project.

3.8 NOISE



3.8.1 Methodology

Traffic noise levels are measured in A-weighted decibels (dBA), which approximate the way the human ear hears sounds at different frequencies. The A-scale emphasizes the higher frequency noise content, since it is more annoying to the human ear. Since traffic noise varies over time, sound levels for this study are expressed as “equivalent levels,” or L(eq), and are representative of average sound levels. Figure 3-7 shows the noise levels of common household and traffic sounds for reference to decibel levels.



F

Figure 3-7. Noise levels of common sounds

FWHA has established Noise Abatement Criteria (NAC) for absolute noise impacts for several categories of land use activities. See Table 3-4. ITD abatement criteria are one (1) dBA under the FHWA criteria. Primary consideration for noise abatement purposes is given to exterior areas.

Table 3-4. FHWA and ITD Noise Abatement Criteria

NOISE ABATEMENT CRITERIA			
Activity Category	Leq (dBA)		Land Use Characteristics
	FHWA	ITD	
A	57	56	Lands where “serenity and quiet are of extraordinary significance and serve an important public need”
B	67	66	Picnic areas, recreation areas, parks, residences, motels, schools, churches, libraries, and hospitals
C	72	71	Developed lands, properties, or activities not included in A or B (i.e. commercial, industrial, etc.)
D	--		Undeveloped lands
E	52	51	Interior of residences, libraries, hospital, etc.

Potential Mitigation Measures

According to federal and state policies, specific conditions must be met before traffic noise abatement is implemented as part of the proposed project. Proposed noise mitigation measures must be considered both reasonable and feasible. Reasonable and feasible conditions are met when noise levels are decreased by a minimum of 5 dBA and the noise abatement measure is economically feasible. If either of these two conditions is not satisfied, then the noise abatement measure is not considered reasonable. The types of noise mitigation measures include:

Traffic Management Measures

This mitigation measure includes reducing automobile speeds along the proposed roadway. According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance* report produced by FHWA, a reduction in speed of more than 20 mph would be necessary for a noticeable decrease in noise levels.

Horizontal and/or Vertical Alignment Shifts

Alteration of roadway alignments can decrease noise levels by moving the traffic away from receivers. In order for the noise level to decrease by 5 dBA (the amount required for the change to be perceptible), the roadway would need to be moved about 100 feet.

Construction of Berms or Buffer Zones and Associated Landscaping

Construction of earth berms or buffer zones can be effective noise abatement measures. Berms would need to be eight to twelve feet high to be effective, which would require a minimum additional right-of-way width of 48 to 72 feet. Vegetation in a buffer zone must be extremely dense and at least 100 feet thick (according to FHWA's June 1995 *Highway Traffic Noise Analysis and Abatement Policy and Guidance*) in order to achieve noticeable noise reduction by itself.

Noise Barrier Abatement Options

For a sound wall to be effective, it must be high enough and long enough to block the view of the road from the receiver's perspective. The *Highway Traffic Noise Analysis and Abatement Policy and Guidance* states that a good rule of thumb is that the noise barrier should extend four times as far in each direction as the distance from the receiver to the barrier. For instance, if the receiver is 50 feet from the proposed sound wall, the wall needs to extend at least 200 feet on either side of the receiver in order to shield the receiver from noise traveling past the ends of the wall. Openings in sound walls for driveway connections or intersecting streets destroy the effectiveness of barriers. The ITD Noise Abatement Policy also requires that sound walls achieve at least a 5 dBA reduction at impacted receivers.

3.8.2 Affected Environment

The primary sources of noise in the project area are automobile and truck traffic along both Snake River Avenue and Southway, as well as occasional train traffic. Existing noise measurements were taken at seven locations. See Table 3-5.

Table 3-5. Existing Noise Levels.

Site #	Land Use Type	Activity Category	Measured Hourly *Leq (± 1 dBA)	Address/Location
1	Residential	B	50	1st Street, just south of Southway Avenue
2	Commercial	C	60	Snake River Ave, north of Country Club Drive, parking lot of KOSE FM
3	Commercial	C	65	Halfway between 2nd & 3rd St., north side of Southway Avenue
4	Church	B	57	Church of Christ parking lot, 302 Southway Avenue
5	Park	B	64	DeMolay Park on Prospect Avenue, overlooking Snake River Avenue
6	Park	B	61	Kiwanis Park Playground, west of Snake River Avenue
7	Residential	B	55	Approximately 19th Avenue & Prospect Avenue

*Leq = the equivalent or average noise level, in units of dBA

Existing noise level contours along both Snake River Avenue and Southway were calculated using the Traffic Noise Model (TNM) 2.5 software; no existing noise levels exceeded the NAC for any receivers along the roadways. See Figures 3-8 and 3-9 and Table 3-6. On-site measurements were made to verify the accuracy of the noise model.

3.8.3 Environmental Consequences

No-action Alternative

Under the No-action Alternative, traffic would continue to increase. Noise levels would increase an average of 2 dBA over existing noise levels for all receivers along both roadways. The noise level at one receiver in the project area (#84) would exceed ITD's NAC. See Figures 3-8 and 3-9 and Table 3-6.

Preferred Alternative

Direct Impacts

Under the Preferred Alternative, traffic will continue to increase. Noise levels will increase an average of 3 dBA over existing noise levels for all receivers along both roadways. The noise levels at four receivers in the project area (#3, 84, 167, and 168) will exceed ITD's NAC. See Figures 3-8 and 3-9 and Table 3-6 (noise impacts are highlighted).



FIGURE 3-9
NOISE IMPACTS - SOUTHWAY

Chapter 3 – Affected Environment and Environmental Consequences

Table 3-6. Existing and Predicted 2030 Noise Levels for No-action and Build Alternatives

Location	Activity Category	Distance from Existing Centerline (ft)	Existing L_{eq} (dBA)	2030 Predicted Noise Levels			Distance from Proposed Centerline (ft)
				No-action L_{eq} (dBA)	Build L_{eq} (dBA)	Difference between Build and No-action (dBA)	
Receiver 1	B	360	50	52	54	2	350
Receiver 2	C	150	57	59	59	0	150
Receiver 3	B	66	63	65	66	1	62
Receiver 4	B	152	54	57	59	2	158
Receiver 5	B	68	61	64	64	0	74
Receiver 6	B	77	59	61	62	1	82
Receiver 7	B	187	54	56	58	2	192
Receiver 8	B	139	55	57	57	0	143
Transect 1 – 50'	D	50	69	73	73	0	50
Transect 1 – 75'	D	75	66	69	70	1	75
Transect 1 – 100'	D	100	64	67	67	0	100
Transect 1 – 125'	D	125	62	65	66	1	125
Transect 1 – 150'	D	150	60	64	64	0	150
Transect 1 – 200'	D	200	58	61	61	0	200
Transect 1 – 250'	D	250	56	59	59	0	250
Transect 1 – 300'	D	300	55	57	57	0	300
Transect 1 – 400'	D	400	52	55	55	0	400
Transect 1 – 800'	D	800	45	48	48	0	800
Transect 2 – 50'	D	50	70	72	72	0	0
Transect 2 – 75'	D	75	67	69	71	2	32
Transect 2 – 100'	D	100	64	66	70	4	64
Transect 2 – 125'	D	125	62	64	69	5	96
Transect 2 – 150'	D	150	61	63	67	4	126
Transect 2 – 200'	D	200	59	61	64	3	181
Transect 2 – 250'	D	250	57	60	62	2	237
Transect 2 – 300'	D	300	56	58	60	2	295
Transect 2 – 400'	D	400	53	55	58	3	411
Transect 2 – 800'	D	800	46	49	50	1	876
Transect 3 – 50'	D	50	67	69	69	0	41
Transect 3 – 75'	D	75	64	66	66	0	66

Chapter 3 – Affected Environment and Environmental Consequences

Location	Activity Category	Distance from Existing Centerline (ft)	Existing L_{eq} (dBA)	2030 Predicted Noise Levels			Distance from Proposed Centerline (ft)
				No-action L_{eq} (dBA)	Build L_{eq} (dBA)	Difference between Build and No-action (dBA)	
Transect 3 – 100'	D	100	61	64	63	-1	91
Transect 3 – 125'	D	125	59	62	61	-1	116
Transect 3 – 150'	D	150	58	60	59	-1	141
Transect 3 – 200'	D	200	55	58	57	-1	191
Transect 3 – 250'	D	250	54	56	55	-1	240
Transect 3 – 300'	D	300	52	55	53	-2	290
Transect 3 – 400'	D	400	50	52	52	0	390
Transect 3 – 800'	D	800	43	45	45	0	790
Receiver 39	B	156	55	57	56	-1	156
Receiver 40	B	133	57	59	58	-1	133
Receiver 41	B	136	57	60	59	-1	136
Receiver 42	B	347	49	51	51	0	347
Receiver 43	B	204	54	56	57	1	204
Receiver 44	C	144	58	60	59	-1	144
Receiver 45	C	168	57	59	59	0	187
Receiver 46	C	42	67	69	67	-2	59
Receiver 47	C	72	64	66	66	0	96
Receiver 48	B	198	58	60	61	1	220
Receiver 49	B	246	53	56	56	0	247
Receiver 50	B	295	51	53	54	1	301
Receiver 51	C	109	56	58	61	3	118
Receiver 52	B	151	53	55	57	2	163
Receiver 53	B	63	61	64	64	0	77
Receiver 54	B	167	53	56	58	2	174
Receiver 55	C	94	61	64	64	0	94
Receiver 56	C	90	61	64	62	-2	100
Receiver 57	C	59	68	69	70	1	57
Receiver 58	C	267	55	57	57	0	265
Receiver 59	C	66	66	68	68	0	63
Receiver 60	C	94	63	65	65	0	92
Receiver 61	C	94	63	65	65	0	92

Chapter 3 – Affected Environment and Environmental Consequences

Location	Activity Category	Distance from Existing Centerline (ft)	Existing L_{eq} (dBA)	2030 Predicted Noise Levels			Distance from Proposed Centerline (ft)
				No-action L_{eq} (dBA)	Build L_{eq} (dBA)	Difference between Build and No-action (dBA)	
Receiver 62	C	59	65	67	67	0	62
Receiver 63	C	146	60	62	62	0	149
Receiver 64	C	87	63	65	65	0	89
Receiver 65	C	54	66	68	70	2	56
Receiver 66	B	157	60	62	61	-1	159
Receiver 67	B	85	62	65	65	0	88
Receiver 68	B	209	55	57	57	0	212
Receiver 69	B	211	54	57	57	0	214
Receiver 70	B	150	57	59	59	0	155
Receiver 71	B	116	59	61	62	1	120
Receiver 72	B	104	56	58	60	2	109
Receiver 73	B	102	59	61	63	2	98
Receiver 74	B	225	48	51	52	1	221
Receiver 75	B	230	47	49	50	1	230
Receiver 76	B	98	59	62	63	1	91
Receiver 77	B	164	50	53	56	3	149
Receiver 78	B	137	57	59	62	3	116
Receiver 79	B	125	58	60	63	3	106
Receiver 80	B	259	46	48	50	2	245
Receiver 81	B	168	50	52	55	3	158
Receiver 82	B	220	47	49	53	4	213
Receiver 83	B	142	52	54	58	4	140
Receiver 84	B	59	64	66	67	1	55
Receiver 85	B	63	63	65	65	0	58
Receiver 86	B	305	48	50	52	2	297
Receiver 87	C	239	52	55	54	-1	251
Receiver 88	C	149	56	59	58	-1	159
Receiver 89	C	94	61	63	64	1	103
Receiver 90	C	180	58	60	60	0	230
Receiver 91	B	178	52	54	55	1	183
Receiver 92	B	315	51	53	54	1	320

Chapter 3 – Affected Environment and Environmental Consequences

Location	Activity Category	Distance from Existing Centerline (ft)	Existing L_{eq} (dBA)	2030 Predicted Noise Levels			Distance from Proposed Centerline (ft)
				No-action L_{eq} (dBA)	Build L_{eq} (dBA)	Difference between Build and No-action (dBA)	
Receiver 93	B	166	51	53	55	2	171
Receiver 94	B	150	51	53	54	1	155
Receiver 95	B	191	48	50	52	2	196
Receiver 96	B	299	47	49	51	2	304
Receiver 97	B	166	48	50	51	1	171
Receiver 98	B	167	47	49	50	1	172
Receiver 99	B	159	48	50	51	1	164
Receiver 100	B	183	46	48	49	1	190
Receiver 101	B	182	46	48	49	1	187
Receiver 102	B	185	46	48	49	1	190
Receiver 103	B	188	46	48	49	1	193
Receiver 104	B	195	46	48	48	0	203
Receiver 105	B	351	42	45	45	0	356
Receiver 106	B	205	45	47	48	1	210
Receiver 107	B	213	45	47	47	0	218
Receiver 108	B	224	44	46	47	1	229
Receiver 109	B	64	63	65	65	0	69
Receiver 110	B	117	57	59	61	2	127
Receiver 111	B	249	44	46	46	0	254
Receiver 112	B	255	43	45	46	1	261
Receiver 113	B	279	44	46	47	1	285
Receiver 114	B	157	55	58	59	1	163
Receiver 115	B	363	43	46	47	1	369
Receiver 116	B	363	45	47	49	2	370
Receiver 117	B	235	52	54	56	2	244
Receiver 118	C	79	60	63	63	0	89
Receiver 119	B	311	50	52	54	2	321
Receiver 120	B	344	49	51	53	2	353
Receiver 121	C	93	59	62	62	0	102
Receiver 122	B	410	48	51	52	1	420
Receiver 123	C	88	60	62	62	0	98

Chapter 3 – Affected Environment and Environmental Consequences

Location	Activity Category	Distance from Existing Centerline (ft)	Existing L_{eq} (dBA)	2030 Predicted Noise Levels			Distance from Proposed Centerline (ft)
				No-action L_{eq} (dBA)	Build L_{eq} (dBA)	Difference between Build and No-action (dBA)	
Receiver 124	C	40	65	67	66	-1	51
Receiver 125	C	34	66	68	67	-1	44
Receiver 126	C	43	65	67	66	-1	54
Receiver 127	B	322	48	50	53	3	332
Receiver 128	B	451	46	48	51	3	462
Receiver 129	B	458	45	48	49	1	468
Receiver 130	B	452	46	48	50	2	459
Receiver 131	C	43	64	67	67	0	38
Receiver 132	C	46	64	66	66	0	41
Receiver 133	C	68	59	62	64	2	64
Receiver 134	C	182	52	54	55	1	179
Receiver 135	B	392	45	47	49	2	388
Receiver 136	C	57	61	64	65	1	54
Receiver 137	C	49	63	65	66	1	46
Receiver 138	C	51	47	49	51	2	49
Receiver 139	C	164	54	56	56	0	162
Receiver 140	C	42	63	66	66	0	40
Receiver 141	B	397	43	46	45	-1	396
Receiver 142	C	42	63	65	66	1	41
Receiver 143	C	45	63	65	66	1	44
Receiver 144	C	36	64	67	67	0	36
Receiver 145	B	343	45	48	49	1	342
Receiver 146	C	45	63	65	66	1	44
Receiver 147	C	37	64	66	67	1	37
Receiver 148	B	274	49	52	52	0	274
Receiver 149	B	240	49	52	52	0	238
Receiver 150	B	339	45	48	49	1	341
Receiver 151	B	63	59	62	63	1	66
Receiver 152	B	98	57	59	60	1	102
Receiver 153	B	83	58	60	61	1	88
Receiver 154	B	78	59	61	62	1	83

Location	Activity Category	Distance from Existing Centerline (ft)	Existing L_{eq} (dBA)	2030 Predicted Noise Levels			Distance from Proposed Centerline (ft)
				No-action L_{eq} (dBA)	Build L_{eq} (dBA)	Difference between Build and No-action (dBA)	
Receiver 155	B	264	48	51	53	2	269
Receiver 156	B	115	56	58	58	0	119
Receiver 157	B	79	59	61	62	1	83
Receiver 158	B	184	51	53	55	2	188
Receiver 159	B	81	59	61	62	1	85
Receiver 160	C	47	64	66	68	2	38
Receiver 161	C	102	58	61	63	2	93
Receiver 162	C	155	55	58	58	0	147
Receiver 163	C	213	52	55	56	1	206
Receiver 164	C	61	62	64	66	2	54
Receiver 165	C	95	58	61	63	2	90
Receiver 166	B	95	58	60	63	3	90
Receiver 167	B	83	63	65	68	3	55
Receiver 168	B	92	62	65	67	2	92
Receiver 169	B	125	56	58	57	-1	125
Receiver 170	B	93	52	55	54	-1	93

Indirect Impacts

There will be no indirect noise impacts from the Preferred Alternative.

3.8.4 Mitigation

Traffic Management Measures

Both Snake River Avenue and Southway are classified as urban minor arterials and the Preferred Alternative will have a design speed of 35 mph for both roadways. A speed limit of 15 mph would be needed to assure a noticeable decrease in noise levels, which is inconsistent with the roadway classifications. This measure is not a viable abatement measure for this project.

Alignment Shifts

As discussed in Chapter 2, various horizontal alignments were evaluated for the Preferred Alternative. The Preferred Alternative was selected because it best meets the project purpose and need and minimizes environmental impacts (including relocations and economic impacts). Any alterations intended to decrease noise impacts would result in impacts to other environmental resources. Further, in order for the noise level to decrease

by 5 dBA (the amount required for the change to be perceptible), the roadway would need to be moved about 100 feet, which is not practicable.

Construction of Berms or Buffer Zones with Associated Landscaping

The construction of berms or buffer zones with landscaping to achieve noise mitigation is not reasonable along the corridor due to the cost and impacts associated with the large amount of additional right-of-way that would be required.

See Appendix F for the Non Barrier Noise Abatement Checklist.

Noise Barrier Abatement Options

Noise Wall Analysis

Four receivers will be impacted by the Preferred Alternative. These receivers are shaded in Table 3-5 and shown in Figures 3-7 and 3-8. See also Appendix F for the Noise Barrier Abatement Checklists.

Noise Wall #1 – Receivers 3 & 84

A 675-ft long noise wall was considered for this area. It was found that a 10-ft high noise wall could obtain a 5 dBA noise reduction at both residences. The 10-ft noise wall would cost \$168,750 (\$84,375 per receiver), which is above the \$20,000 per receiver maximum cost allowed in the ITD Noise Policy. For this reason, a noise wall is not recommended for this area. See Figure 3-10.

Receivers 167 & 168 – Lewiston Levee Recreation Trail & Planned Park

These receivers are located in the planned park and along the Lewiston Levee Recreation Trail. The City of Lewiston is opposed to a noise wall which would create a visual impact to trail and park users and would detract from the open feel of the trail and proposed park area. Users of the trail are mobile and are exposed to a noise impact for a short duration as they travel the portion of the trail close to Snake River Avenue.

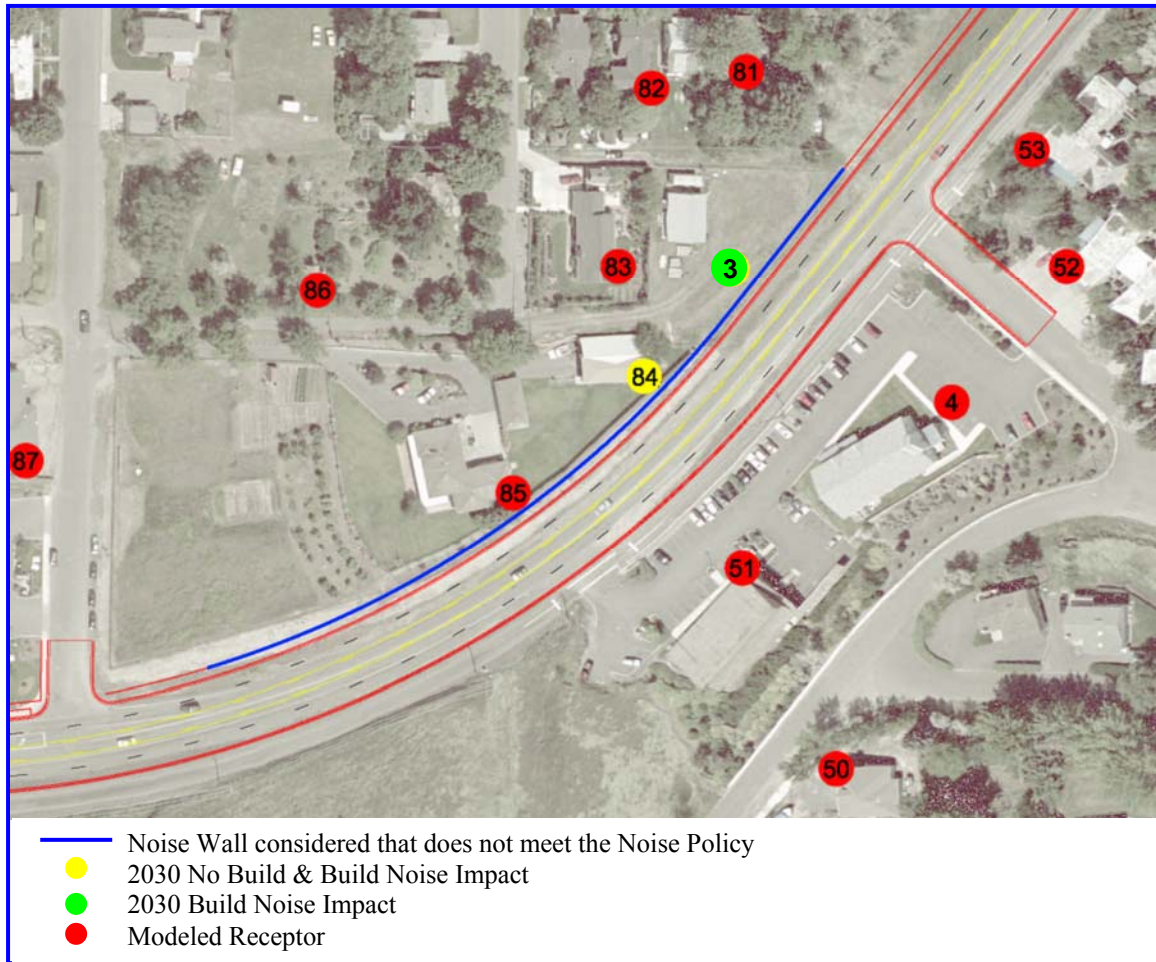


Figure 3-10. Noise Wall

3.9 WATER QUALITY



3.9.1 Methodology and Applicable Statutes and Regulations

The Federal Water Pollution Control Act⁸ (otherwise known as the Clean Water ACT (CWA)), controls discharge of dredge or fill material into “waters of the U.S.” and requires states and Indian tribes to set specific water quality criteria and implement pollution control programs. The EPA is charged with regulating its implementation. The applicable sections of the CWA are Section 402 (National Pollution Discharge Elimination System (NPDES)), Section 404 (Permit for Placing Fill in Waters of the U.S.), and Section 401 (Water Quality Certification).

A Waters of the U.S. Inventory Report was prepared for this project. See Appendix C. A reconnaissance survey of the project area was conducted in early October of 2005 in accordance with the USACE Wetlands Delineation Manual, which provides technical guidance and recommended procedures to determine wetlands areas and waters of the

⁸ 33 U.S.C. 1251-1376.

U.S. Field investigations and literature searches (including existing data such as aerial photography, topographic maps, soil surveys, and the National Wetlands Inventory Map), were used to identify and evaluate potential waters of the U.S. in the project area.

3.9.2 Affected Environment

Groundwater

There is a Sole Source Aquifer (SSA)⁹ (the Lewiston Basin Aquifer) which extends under the project area. See Figure 3-11. Due to the importance of Sole Source Aquifers for drinking water, it is protected from contamination by the SSA Protection Program.

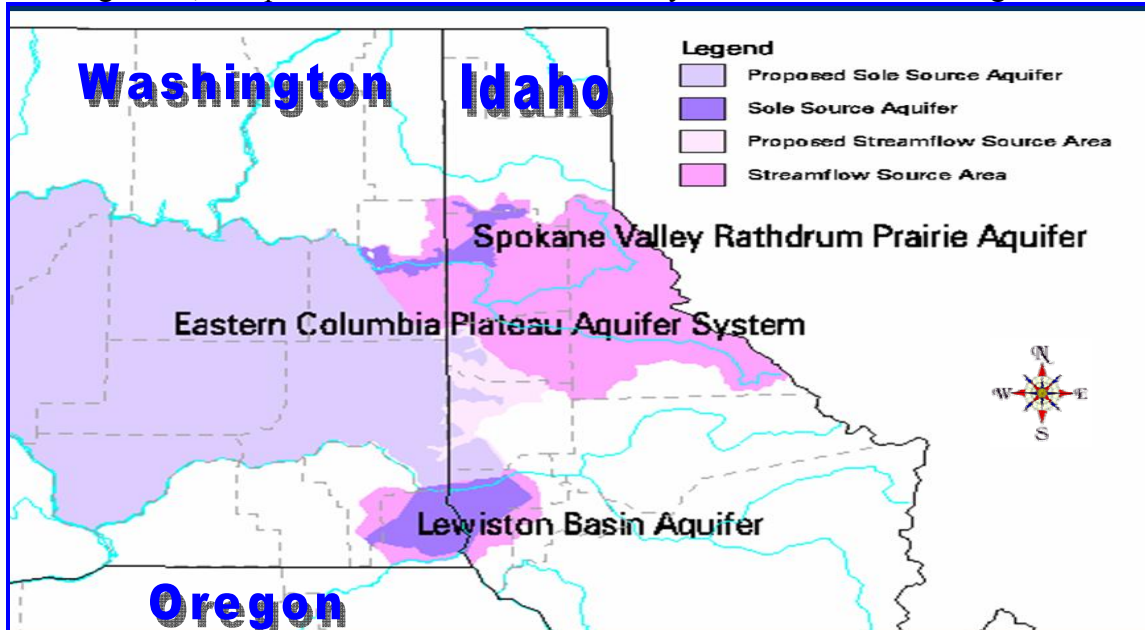


Figure 3-11. Sole Source Aquifer in Lewiston, Idaho

Surface Water

The project area is located along the eastern bank of the Snake River just south of its confluence with the Clearwater River. There is also a small intermittent stream that runs westward along the north side of Bryden Canyon Road, originating in the surrounding foothills and flowing downhill to empty into the Snake River. There are no other rivers or streams in the project area. There are, however, three drainage ditches used to carry storm runoff water and two storm water ponds, operated by the USACE, located approximately 100 feet west from the centerline of Snake River Avenue in the northern portion of the project area. One drainage ditch runs parallel to Snake River Avenue from just north of the Snake River Avenue/Southway intersection and empties into the previously referenced stream. Two more drainage ditches flow along the south side of Southway, with one

⁹ Sole Source Aquifer is defined as any aquifer that 1) is so designated by the EPA, 2) supplies 50 percent or more of the drinking water to the population living over the aquifer, 3) has distinct hydro geological boundaries, and 4) for which there is no economically feasible alternative source of drinking water if it should be contaminated. The SSA Protection Program is authorized under Section 1424(e) of the Safe Drinking Water Act, 42 U.S.C. §300f et seq.

adjacent to the roadway and the other adjacent to the Southway Trail. The three drainage ditches and the intermittent stream are classified as jurisdictional by the USACE due to their hydrological connection to the Snake River. See letter dated November 29, 2006 from the USACE in Chapter 4 – Comments and Coordination for preliminary jurisdictional determination.

Storm Sewers

A storm drain collects water from Snake River Avenue and adjacent properties north of 11th Avenue and routes it to the USACE ponds. Storm water from Snake River Avenue south of 11th Avenue and from Southway generally flows from the roadway and infiltrates into the ground or is collected and conveyed into the Snake River. A storm sewer which collects storm water from Lewiston¹⁰ is adjacent to Southway and discharges directly into the Snake River near the Snake River Avenue/Southway intersection.

3.9.3 Environmental Consequences

No-action Alternative

Under the No-action Alternative, there would be no changes to current conditions and trends in the water quality of the Snake River and the Lewiston Basin Aquifer. Untreated storm water would continue to be discharged directly into the Snake River in the project area with the amount of traffic related pollutants increasing in proportion to the growth in traffic volumes. There are plans for improvements in storm water drainage upstream from the project area from independent projects, which would help improve the overall water quality in the Snake River.

Preferred Alternative

Direct Impact - Groundwater

The Preferred Alternative will not impact the Lewiston Basin Aquifer. The EPA has concurred that the project does not pose any risk to contamination of the Lewiston Basin Aquifer. See letter dated August 10, 2006 from the EPA in Chapter 4 – Comments and Coordination.

Direct Impact – Surface Water

The Preferred Alternative increases the amount of storm water runoff by widening the paved roadway surface. The amount of runoff that will be placed in the storm sewer will also increase because the entire project will have curb and gutter which will capture the water that currently flows from the roadway and infiltrates into the ground.

Improvements will be made to the storm drainage system to maintain, if not improve, the water quality of the Snake River by acting as a filter for contaminants in the storm water runoff, such as sediment, debris, and household hazardous waste (i.e., insecticides,

¹⁰ The area of Lewiston that drains into this storm sewer measures approximately 882 acres.

pesticides, solvent, and auto fluids). These systems will be designed and constructed to comply with the water quality standards and other aquatic protection laws. The storm water from the roadway will be routed to one of three storm sewers:

- North Snake River Avenue Storm Drain
- Southway Storm Drain
- Country Club Drive Storm Drain

North Snake River Avenue Storm Drain

North of 11th Avenue, the roadway runoff is currently collected in the existing storm drain system and routed to the USACE ponds located in the Kiwanis park area. Through this region, curb and gutter will be installed and the storm drain system upgraded. Overall, the net difference in the runoff collected and conveyed to the USACE ponds in this area will be minimal.

In the area between the Lewiston Pre-Mix facility and 11th Avenue, the project will increase the net runoff collected due to the widening of the roadway and the installation of curb and gutter. The collected storm water from this area will be combined with that from the system located north of 11th Avenue. The overall increase in the storm water collected in this area will raise the depth of the two USACE ponds by ¼ inch during the 100-year precipitation event. These two ponds are also connected to the network of levee ponds. The overall affect to the entire USACE pond system from the Preferred Alternative is essentially negligible.

Southway Storm Drain

Currently, the majority of the roadway does not have curb and gutter and storm water flows away from the paved surfaces and either infiltrates into the ground or is conveyed in drainage ditches. Storm water collected in the Southway basin is discharged into the Snake River at a location near the Snake River Avenue/Southway intersection. The Lewiston Storm Water Master Plan, dated October 2001, indicates a peak discharge at this location of 183 cubic feet per second (cfs), which includes storm water collected from the Southway basin (as well as a portion of the Normal Hill storm water drainage basin once the Master Plan storm water collection improvements are completed).

The roadway drainage for Snake River Avenue from the Lewiston Pre-Mix facility to Bryden Canyon Road and for Southway will be routed into the existing storm sewers. The widening of the roadway and the addition of curb and gutter will increase the runoff discharged. An infiltration basin will be constructed on the west side of Snake River Avenue near the Southway intersection, along with a diversion structure to divert the initial storm runoff, or first flush, during a weather event (see Figure 3-12). Most chemicals and sediment that collect on the roadway and other areas within the drainage basin are washed into the storm drain with the first flush storm runoff and currently discharge directly into the Snake River. This existing condition will be improved by routing the first flush storm runoff through the infiltration basin to remove the chemicals and sediment from the storm water before it discharges into the Snake River with

approximately 70 to 75 percent of all major storm events able to be totally contained within the infiltration basin. The infiltration basin will also attenuate peak storm sewer discharge of the proposed project roadway drainage and improve water quality for all contributing storm drainage. It will attenuate design year roadway drainage flows of the improved roadway to a discharge equal to or less than the pre-improved roadway discharge rates.

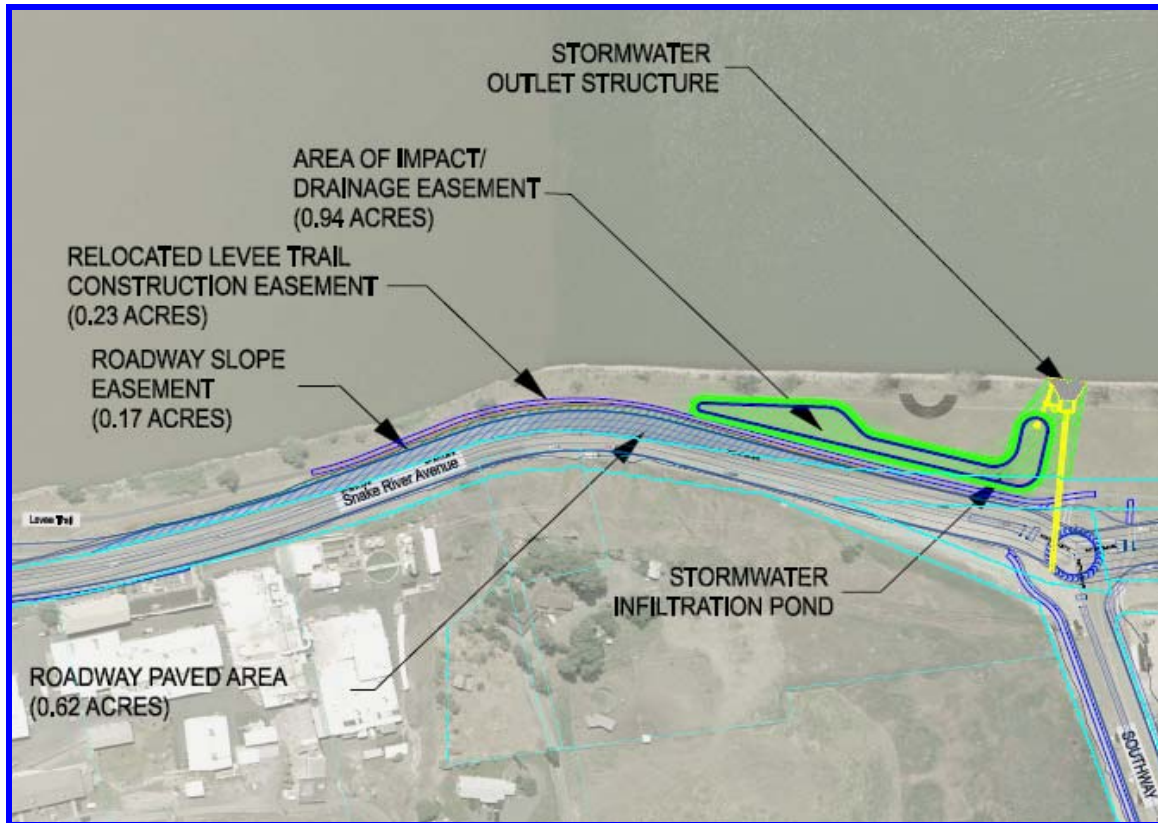


Figure 3-12. Proposed Storm Drain Improvements (Southway)

Country Club Drive Storm Drain

The runoff from Snake River Avenue between Country Club Drive and Bryden Canyon will be routed to a storm sewer discharging in an infiltration basin to be constructed east of Snake River Avenue near the Bryden Canyon off-ramp. This infiltration basin will attenuate peak storm sewer discharge to improve water quality (Figure 3-13).

The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service has concurred in the determination as to potential impacts to water quality as it relates to the protection of the threatened and endangered aquatic species present in the Snake River and has approved all of the plans for the storm water drainage improvements. See letter dated December 19, 2006 in Chapter 4 – Comments and Coordination and the Biological Evaluation in Appendix B. Any activity discharging pollutants from a point source into surface waters or ground waters requires a National

Pollution Discharge Elimination System (NPDES) permit issued by the EPA. This requirement applies to these three storm drain systems.

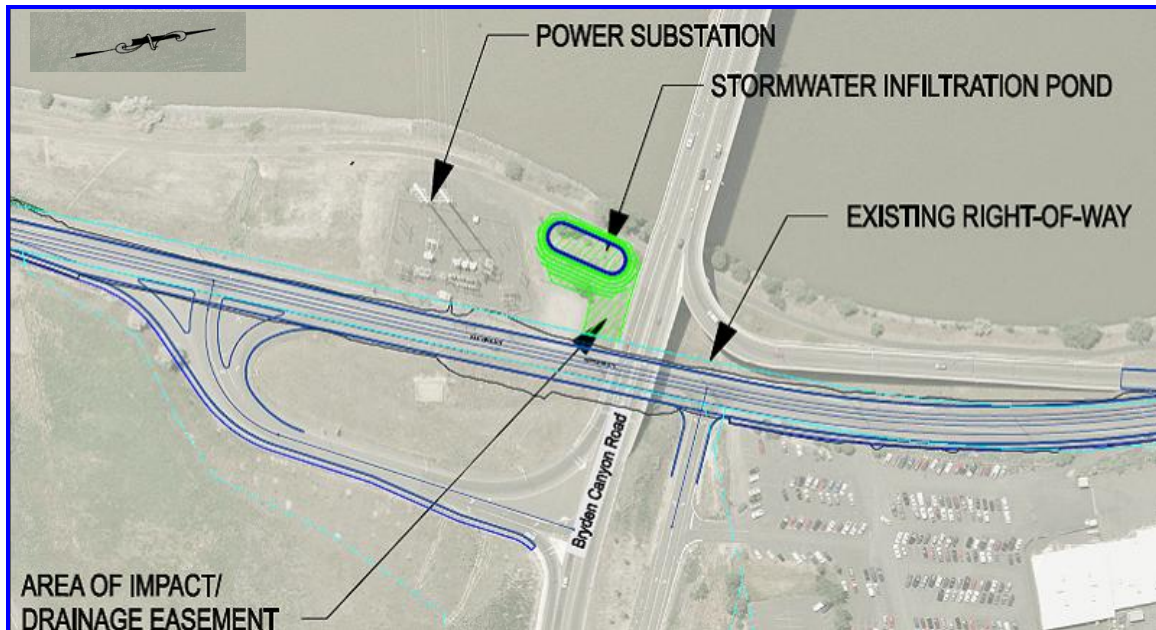


Figure 3-13. Proposed Storm Drain Improvements (County Club Drive)

Indirect Impact

There will be no indirect impacts from the Preferred Alternative.

3.9.4 Mitigation

To minimize storm water impacts to receiving waters, the following actions will be taken:

- The storm water from the roadway will be routed to one of three storm sewers: North Snake River, Southway and Country Club Drive Storm Sewers.
- Two infiltration basins will be constructed, one near Southway that will include a diversion structure to divert the initial storm runoff during a weather event and one near Country Club Drive.
- A Storm Water Pollution Prevention Plan (SWPPP) will be developed and incorporated into the final design plans of the project and a Notice of Intent (NOI) form will be submitted prior to construction of the project.
- Short-term impacts to water quality will be minimized through implementation of ITD's Best Management Practices (BMP) from the current Erosion and Sediment Control Manual in effect at the time of construction.
- NPDES permits will be required for the three storm drainage systems.

3.10 WETLANDS



3.10.1 Methodology

Under the Clean Water Act, the United States Army Corps of Engineers (USACE) regulates placement of dredged or fill material impacting waters of the United States, including jurisdictional wetlands. A Waters of the U.S. Inventory Report was prepared

for this project. See Appendix C. A reconnaissance survey of the project area was conducted in early October of 2005 in accordance with the USACE Wetlands Delineation Manual, which provides technical guidance and recommended procedures to determine wetlands areas and waters of the U.S. Field investigations and literature searches (including existing data such as aerial photography, topographic maps, soil surveys, and the National Wetlands Inventory Map), were used to identify and evaluate potential waters of the U.S., including wetlands, in the project area.

3.10.2 Affected Environment

The Waters of the U.S. Inventory Report states that no wetland areas were identified in the project area. It did, however, identify the two USACE storm water ponds located approximately 100 feet west of the centerline of Snake River Avenue in the northern portion of the project area, a small intermittent stream that flows along the north side of Bryden Canyon Road into the Snake River, and three storm water drainage ditches (one that runs parallel to Snake River Avenue, one that runs between Southway and the Southway Trail, and one that runs along the south side of the Southway Trail). See Figure 3-11. The USACE has determined that the Snake River and its tributaries, including drainage ditches that divert water to streams and creeks, are waters regulated under Section 404 of the Clean Water Act. Therefore, the intermittent stream and the drainage ditches qualify for classification as jurisdictional waters of the U.S. due to their hydrologic connection with the Snake River. See letter dated November 29, 2006 from USACE in Chapter 4 – Comments and Coordination.

3.10.3 Environmental Consequences

No-action Alternative

Under the No-action Alternative, there would be no impacts to wetlands. There will be a slight impact to jurisdictional waters of the U.S. because the amount of traffic related pollutants entering the drainage ditches and the intermittent stream will increase in proportion to the growth in traffic volumes.

Preferred Alternative

Direct Impacts

Under the Preferred Alternative, there will be no direct impacts to wetlands. These improvements eliminate the drainage ditch between Southway and the Southway Trail and the drainage ditch along Snake River Avenue near Bryden Canyon Road. The culvert for the intermittent stream will be widened or replaced. Because these ditches and the intermittent stream are considered jurisdictional waters of the U.S., a Section 404 Permit will be required for the impacts to the two drainage ditches and the intermittent stream, as well as for the proposed improvements to the existing storm water discharge outlet into the Snake River near the intersection of Snake River Avenue and Southway.

Indirect Impacts

Under the Preferred Alternative, there will be no indirect impacts to wetlands or jurisdictional waters of the U.S.

3.10.4 Mitigation

A Section 404 Permit is required for the impacts to the two drainage ditches and the intermittent stream, as well as for the proposed improvements to the existing storm water discharge outlet into the Snake River near the Snake River Avenue/Southway intersection.

3.11 FLOODPLAINS



The Federal Emergency Management Agency (FEMA) delineates 100-year floodplains on Flood Insurance Rate Maps (FIRM). Floodplain maps were obtained from the FEMA website and evaluated. Lewiston also participated in a Flood Insurance Study dated June 20, 1981 which identified flood-prone areas in the city. The project area was not identified as being within a 100-year floodplain.

3.12 VEGETATION, WILDLIFE, AND THREATENED AND ENDANGERED SPECIES



3.12.1 Methodology

The Idaho Department of Fish and Game (IDFG) Clearwater Regional Office and the Idaho Conservation Data Center (CDC) were consulted to obtain information regarding state species of concern in the vicinity of the project area, with the CDC providing data regarding state-listed sensitive species in the project area. See the Natural Resources Memo and letter dated October 24, 2005 in Appendix A. Information on known occurrences of sensitive fish species in the project area was obtained from the IDFG STREAMNET. See letter dated October 31, 2005 in Appendix A. A list of federally protected species for Nez Perce County was obtained from the U.S. Fish & Wildlife Service and the NOAA's National Marine Fisheries Service. See the Biological Evaluation for the Snake River Avenue and Southway Avenue Project in Appendix B. A field survey was conducted which evaluated aquatic and riparian habitat and channel conditions in the project area.

3.12.2 Affected Environment

Vegetation and Wildlife

The project area is located within an urbanized area which provides little suitable habitat for wildlife. The CDC and the IDFG identified several state-listed animal and plant species of concern that have historic known occurrences in the vicinity of the project area. See Table 3-7.

Threatened and Endangered Species

The Snake River plays host to five threatened or endangered¹¹ species of fish, i.e., the bull trout, the fall chinook salmon, the spring/summer chinook salmon, the sockeye salmon, and the steelhead.¹² Also, one threatened plant species was flagged as potentially occurring in the project area, i.e. Spalding's Silene or Catchfly. The NOAA's National Marine Fisheries Service has listed the Snake River as critical habitat for the Snake River steelhead Ecological Significant Unit (ESU), the Snake River sockeye salmon, and the Snake River spring/summer and fall Chinook salmon. Nez Perce County also has the potential for the presence of the Canada lynx and the bald eagle (both of which are listed as threatened) and the gray wolf (listed as experimental/non-essential). See Table 3-7.

Table 3-7. Threatened and Endangered Species and Species of Special Concern with Determination as to Effect

Common Name	Scientific Name	Status	Presence/Habitat	Determination
Plants				
Green-band mariposa lily	<i>Calochortus macrocarpus var maculosus</i>	BLM ¹³ Type 2	Not known or expected to occur in the project area	No Effect
Idaho hawksbeard	<i>Crepis bakeri ssp. Idahoensis</i>	BLM Type 2	Not known or expected to occur in the project area	No Effect
Stalk-leaved monkey flower	<i>Mimulus patulus</i>	BLM Type 3	Not known or expected to occur in the project area	No Effect
Holzinger's Orthotricum Moss	<i>Orthotrichum holzingeri</i>	State GP 2	Not known or expected to occur in the project area	No Effect
Animals				
Ring-necked snake	<i>Diadophis punctatus</i>	BLM Type 5	Not known or expected to occur in the project area; Lack of suitable habitat	No Effect
Woodhouse's toad	<i>Bufo woodhousii</i>	BLM Type 3	Not known or expected to occur in the project area; Potential suitable habitat by USACE settling ponds	No Effect
Fish				
Inland Columbia Basin redband trout	<i>Oncorhynchus mykiss gairdneri</i>	USFWS and BLM Sensitive ¹⁴	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect

¹¹ Endangered is defined as "any species in danger of extinction throughout all or a significant portion of its range." Threatened is defined as "any species likely to be classified as Endangered within the foreseeable future throughout all or a significant portion of its range."

¹² The sockeye salmon is listed as endangered, while the other identified fish species are listed as threatened. Photo source: www.metrokc.gov.

¹³ Bureau of Land Management ranking designation

¹⁴ It was petitioned for listing under the Endangered Species Act (ESA) in the 1990s, but was denied by the issuance of a 90-day rejection notice.

Common Name	Scientific Name	Status	Presence/Habitat	Determination
Westslope cutthroat trout	<i>Oncorhynchus clarki lewisi</i>	USFWS and BLM Sensitive	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect
White sturgeon	<i>Acipenser transmontanus</i>	USFWS and BLM Sensitive	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect
Threatened and Endangered Species				
Bull trout	<i>Salvelinus confluentus</i>	Threatened	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect
Spring/summer and fall chinook salmon	<i>Oncorhynchus tshawytscha</i>	Threatened/ Critical Habitat	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect
Steelhead	<i>Oncorhynchus mykiss</i>	Threatened/ Critical Habitat	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect
Sockeye salmon	<i>Oncorhynchus nerka</i>	Threatened/ Critical Habitat	Present in Snake River adjacent to project area; Migration habitat in Snake River	May affect, not likely to adversely affect
Gray wolf	<i>Canis lupus</i>	Experimental/ Non-essential	No wolf packs present; lack of suitable habitat and ungulate prey.	No Effect
Canada lynx	<i>Lynx canadensis</i>	Threatened	Not present; lack of suitable habitat	No Effect
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened*	Not present; lack of suitable habitat	No Effect
Spalding's catchfly	<i>Silene spaldingii</i>	Threatened	Not present; lack of suitable habitat	No Effect

*Delisted as of June 28, 2007

In addition to the species identified by the CDC and the IDFG, a concerned citizen identified the presence of black-crowned night-heron (*Nycticorax nycticorax*) in the Corps of Engineers pond north of the US-12 Dike Bypass/Snake River Avenue intersection. It is listed by the CDC as an Idaho Species of Greatest Conservation Need (SGCN) with a ranking of S2B (breeding population imperiled), but it is not included in

the SGCN listing for their Palouse Prairie ecological section (which includes the Lewiston area). This bird is also a protected non-game species.¹⁵

3.12.3 Environmental Consequences

No-action Alternative

Under the No-Action Alternative, there would be no impact on the Woodhouse's toad, the ring-necked snake, the green-band mariposa lily, the Idaho hawksbeard, the stalk-leaved monkey flower, the Holzinger's Orthotrichum Moss, the Spalding's Catchfly, the gray wolf, the Canada lynx and the bald eagle since these species are not present in the project area and/or there is a lack of suitable habitat. There would also be no impact to the black-crowned night heron due to the lack of construction activities during its spring breeding season.

As for the Inland Columbia Basin redband trout, the Westslope cutthroat trout, the white sturgeon, the bull trout, the fall chinook salmon, the spring/summer chinook salmon, the sockeye salmon, and the steelhead, current trends in population would remain unchanged. Currently, the fish habitat in the Snake River is functioning appropriately for percentages of sediment, water temperatures, width/depth ratio, habitat access, and pool size¹⁶. It is functioning at-risk in terms of potential toxicity, cover and off-channel habitat, streambank stability, floodplain connectivity, and riparian reserves.

Preferred Alternative

Direct Impacts

The Preferred Alternative results in a "May Affect, Not Likely to Adversely Affect" determination for the bull trout, the fall chinook salmon, the spring/summer chinook salmon, the sockeye salmon, and the steelhead (including critical habitat), with potential negative impacts to the aquatic species and critical habitat limited to temporary increases in suspended sediment in the Snake River during construction and future beneficial impacts from suspended sediment inputs into the Snake River being eliminated through the use of infiltration ponds. The Inland Columbia Basin redband trout, the Westslope cutthroat trout, and the white sturgeon could potentially be impacted by fine sediment inputs during construction. Further, the storm drain improvements contribute to an improvement in water quality in the Snake River by reducing suspended sediment levels, which benefits these species and their migration habitat.

¹⁵ Protected Nongame Species: no person shall take or possess those species of wildlife classified as Protected Nongame, at any time or in any manner, except as provided in Sections 36–106(e) and 36–1107, Idaho Code, by Commission rule, or IDAPA 13.01.10, "Rules Governing the Importation, Possession, Release, Sale, or Salvage of Wildlife," Subsection 100.06.b. Protected Nongame status is not intended to prevent unintentional take of these species, protection of personal health and/or safety, limit property and building management, or prevent management of animals to address public health concerns or agricultural damage.

¹⁶ The Snake River in the project area is a run type of habitat, without pools being required.

The Preferred Alternative results in a No Effect determination on the Woodhouse's toad, the green-band mariposa lily, the Idaho hawksbeard, the stalk-leaved monkey flower, the ring-necked snake, the Holzinger's Orthotrichum Moss, the Spalding's catchfly, the gray wolf, the Canada lynx, and the bald eagle since these species are not present in the project area and/or there is a lack of suitable habitat.

It is not anticipated that construction activities will affect the black-crowned night-heron at this location because they are accustomed to existing urban activities and traffic noise (telephone conversation with Ray Hennekey, Idaho Department of Fish and Game) unless they are nesting. The presence and nesting status of the black-crowned night-heron will be determined prior to construction, which is not anticipated for several years for this phase of the project.

Indirect Impacts

There will be no indirect impacts on wildlife, vegetation, or threatened and endangered species from the Preferred Alternative.

3.12.4 Mitigation

- Construct two infiltration basins with a diversion structure adjacent to Snake River Avenue.
- The Contractor will also employ ITD's current Erosion and Sediment Control – Best Management Practices for construction activities in effect during construction.
- Follow these National Marine Service conditions of Biological Assessment approval:
 - All spoil sites, borrow pits, riprap, and equipment staging areas will be located in approved and/or permitted areas to avoid or minimize any potential impacts on the water quality of fish habitat.
 - Staging areas, rock and gravel borrow sources, and waste material disposal sites associated with highway construction activities will be located outside riparian reserves and any 100-year floodplain to avoid impacts to salmon and trout habitat, with storage of fuels and other toxicants and/or refueling prohibited in the riparian reserves.
 - A designated refueling area will be established for fuel, oil, and other hazardous materials at least 200 feet away from waterways to insure that accidental spills cannot impact water quality or salmonid habitat, with a spill prevention/contingency plan prepared and made available to IDFG.
 - Sidecasting of road material into the Snake River active channel or its riparian reserve areas will also be prohibited.
- Prior to construction of the Snake River Avenue/ US-12 Dike Bypass intersection, the presence of the black-crowned night-heron will be determined and appropriate construction limitations, if any, will be incorporated into the construction contract.

3.13 CULTURAL RESOURCES



3.13.1 Methodology

Section 106 the National Historic Preservation Act (NHPA) of 1966 as amended (and its implementing regulations found in 36 CFR 800) requires that each property or site within the Area of Potential Effects (APE) be evaluated for eligibility for inclusion on the National Register of Historic Places (NRHP).

To be eligible for the NRHP, an historic property¹⁷ (be it a structure or archaeological site) must qualify under one of the NRHP eligibility criteria defined in 36 CFR 60.4, which are:

- **A-** Associated with events that have made a significant contribution to the broad patterns of our history
- **B-** Associated with the lives of persons significant in our past
- **C-** Embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction
- **D-** Yielded, or may be likely to yield, information important in prehistory or history

If cultural resources that qualify for inclusion on the NRHP are identified within the project area, Section 4(f) of the Department of Transportation Act of 1966¹⁸ requires that those resources be avoided, unless there is no feasible and prudent alternative to the use of those resources and the proposed project includes all possible planning to minimize harm to the resource. “Use” is defined as either 1) permanent incorporation into a transportation facility, 2) temporary but adverse occupancy, or 3) constructive.¹⁹ Properties are evaluated based upon Idaho State Historic Preservation Office (SHPO) ratings for historic structures. See Table 3-8.

¹⁷ *Historic Property* is defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places,” which is maintained by the Secretary of the Interior. Also includes those of traditional religious and cultural importance to Native American tribes. 36 CFR 800.16(I).

¹⁸ 23 U.S.C. §138 (as amended) and 49 U.S.C. §303 (as amended)

¹⁹ 23 CFR 771.135(p)(1)

Table 3-8. Idaho SHPO Ratings

SHPO RATING	
Eligible	Built within the historic period and retains integrity; excellent example of a style or type; unaltered or only minor alterations or additions; individually eligible for NRHP under Criterion C; also, structures of known historical significance.
Contributing	Built within a historic period and retains integrity; good example of a style or type, but not as well-preserved or well-executed as eligible structures; more substantial alterations or additions than eligible structures, though overall integrity is retained; eligible for NRHP as part of a potential historic district or primarily for historical rather than architectural reasons (which cannot be determined at this point).
Ineligible	Built during the historic period but has had major alterations or additions; no longer retains integrity. Also, out-of-period or built during the modern era.

3.13.2 Affected Environment



Historic Structures

An Intensive Level Survey (ILS) was conducted along Snake River Avenue and Southway which identified and evaluated potentially historic structures (i.e., those constructed in or prior to 1961) within the APE and documented in the Archaeological and Historic Survey Report, dated November 21, 2006.



Archaeological Sites

Previous archaeological reports for the project area were consulted prior to initiating field work. An Intensive Level Survey of the project area (consisting of 20 acres along Snake River Avenue and Southway) was conducted. See the Archaeological and Historic Report. The Report indicated that there are no known archaeological sites recorded in the project area.

3.13.3 Environmental Consequences

No-action Alternative

There would be no impacts to cultural resources under the No-action Alternative.

Preferred Alternative

Direct Impacts

FHWA, in consultation with ITD and SHPO, has determined that there is a No Historic Properties Affected determination for all identified cultural resources. A Determination of Eligibility and Finding of Effect (DOE/FOE) has been prepared by ITD, under the direction of FHWA, with concurrence from SHPO. A copy of the approved DOE/FOE is in Chapter 4 – Comments and Coordination. The DOE/FOE outlines the eligibility determinations and the type of effect discussed above for each historic property resulting from the implementation of the Preferred Alternative. See also Table 3-9.

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INTERSECTION SNAKE RIVER AVENUE & SOUTHWAY AVENUE, LEWISTON





FIGURE 3-14 HISTORIC STRUCTURES WITHIN THE PROJECT AREA

Chapter 3 – Affected Environment and Environmental Consequences

Table 3-9. Historic Structures Within the Project Area.

Site No./ Address	Photos of Structures	Date (ca.)	Style/ Title	SHPO Rating NRHP Criterion	Determination of Effect
SRA-01 131 Snake River Avenue		c. 1955	<i>Commercial</i> Lewiston Exterminators/ Paramount Pest Control	Ineligible	NA
SRA-02 227 Snake River Avenue		1874	<i>Residential</i> Charles C. and Flora Bunnell House/ Michael and Jodee Luther House	Ineligible	NA
SRA-03 307 Snake River Avenue		1957	<i>Commercial</i> Lewiston Glass and Sash Company/ River Depot	Ineligible	NA
SRA-04 419 Snake River Avenue		1956/ 1960	<i>Commercial</i> A & J Distributing/ Valley Boat & Motor	Ineligible	NA
SRA-05 815 Snake River Avenue		c. late 1940s or early 1950s	<i>Commercial</i> General Petroleum Corp. / Theissen Oil	Ineligible	NA
SRA-06 915 Snake River Avenue		1960	<i>Commercial</i> John's Electric Shop/ John's Electric, Inc.	Ineligible	NA
SRA-07 1101 Snake River Avenue		c. 1950	<i>Commercial</i> True's Oil Bulk Plant/ Kissler Enterprises	Ineligible	NA
SRA-08 1127 Snake River Avenue		1955	<i>Commercial</i> Lewiston Tank Works/ Golden Arts Fine Jewelry	Ineligible	NA
SRA-09 1200 Snake River Avenue		c. 1930	<i>Commercial</i> Lewiston Grain Growers/ Primeland Cooperatives	Eligible/ A	No Effect
SRA-10 1402 Snake River Avenue		Late 1940s	<i>Commercial</i> Dunclick, Inc./ Lewiston Pre-Mix	Ineligible	NA
SRA-11 2560 Snake River Avenue		1953	<i>Commercial</i> KLER Radio Station/ KOZE radio station	Eligible/ A	No Effect
SRA-12 803 16 th Avenue		1947	<i>Commercial</i> Harley E. Steiner House/ Ronald W. Alm Podiatrist	Ineligible	NA

Site No./ Address	Photos of Structures	Date (ca.)	Style/ Title	SHPO Rating NRHP Criterion	Determination of Effect
SRA-13 railroad spur on west side of Snake River Avenue		1899	Northern Pacific Railroad spur/ Camas Prairie Railnet spur	Ineligible	NA
SRA-14 227, 531 & 623 Snake River Avenue		c. 1912	"Miller & Heth 1912" sidewalk remnants	Ineligible	NA

Native American Coordination

Early in the planning stages of the project, the Nez Perce tribe was contacted by FHWA to inform them about the proposed highway improvement project and to solicit their participation at whatever level they deemed appropriate. See Chapter 4 – Comments and Coordination. The November 14, 2005 letter also informed the tribe that historians and archeologists would begin studying the area and the tribe's participation in preserving the cultural resources in the corridor would be welcomed. No verbal or written responses to the letter were received.

Indirect Impacts

There will be no indirect impacts to historic structures or archaeological sites under the Preferred Alternative.

3.13.4 Mitigation

No mitigation is required.

3.14 HAZARDOUS WASTE SITES



3.14.1 Methodology

A search of the Idaho Division of Environmental Response and Remediation (DERR) Comprehensive Emergency Response, Compensation, and Liability Information System (CERCLIS) database was conducted for Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA or Superfund) sites, as well as a search for hazardous material sites under the Resource Conservation and Recovery Act (RCRA), which regulates underground storage tanks (UST) and leaking underground storage tanks (LUST).

3.14.2 Affected Environment

No known CERCLA or Superfund sites are located in the project study area. There are 5 RCRA sites located within the project area. One RCRA site (Ammunition Accessories, Inc. (CCI)) has had corrective action taken for groundwater contamination, but the probability of encountering any hazardous materials during construction is low since it

excavate, open, or remove said material without written approval. (ITD Standard Specification 107.17 – Environmental Protection)

3.15 VISUAL CONDITIONS



3.15.1 Methodology

Field surveys were conducted in the project area, with pictures being taken from several different vantage points.

3.15.2 Affected Environment

Visual conditions of the project area are consistent with those of a commercial/light industrial area. The viewshed includes the Snake River and Kiwanis Park on the west, the residential area on the bluff overlooking Snake River Avenue, and the industrial area on the east. The Southway viewshed includes residential and scattered commercial uses on each side and the Southway Trail on the south side. See Figures 3-16 and 3-17.



Figure 3-16. Visual Conditions on Snake River Avenue



Figure 3-17. Visual Conditions on Southway

3.15.3 Environmental Consequences

No-action Alternative

Under the No-action Alternative, there would be no changes to existing visual conditions.

Preferred Alternative

Direct Impacts

The Preferred Alternative will have a slight change to the visual character existing in the project area. The roadways will be a little wider and the addition of curb and gutter will “clean up” the look of the roadways. The Snake River Avenue/ Southway intersection will be altered from its existing condition and include a two lane roundabout. The project also includes landscaping along the west side of Snake River Avenue from Country Club Drive to the Levee Boat Ramp.

Indirect Impacts

There will be no indirect impacts from the Preferred Alternative.

3.16 INVASIVE SPECIES



3.16.1 Methodology

Executive Order 13112 directs federal agencies to expand and coordinate their efforts to combat the introduction and spread of plants and animals not native to the United States. The Order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Non-native flora and fauna can cause substantial changes to ecosystems, upset the ecological balance, and cause economic harm to our nation’s agricultural and recreational sectors.

3.16.2 Affected Environment

The project area is in an urbanized area. The existing roadside along both Snake River Avenue and Southway consists mostly of grasses, some trees and shrubs, as well as aggregate and paved surfaces.

3.16.3 Environmental Consequences

No-action Alternative

Under the No-action Alternative, there would be no impacts from invasive species.

Preferred Alternative

Direct Impacts

Under the Preferred Alternative, there will be construction activities taking place and, therefore, the opportunity for the introduction and spread of invasive species. Use of ITD’s Best Management Practices (BMPs) on Preservation of Existing/Natural Vegetation (2.3) and BMP on Staging and Materials Site Management (2.5) of the current Erosion and Sediment Control Manual in effect at the time of construction will minimize the spread and introduction of invasive species. See Section 3.18 – Construction Impacts for further information.

Indirect Impacts

There will be no indirect impacts from the Preferred Alternative.

3.17 PERMITS



Implementation of the proposed project requires the following construction permits:

- **Section 404 Permit** – A Section 404 permit is required for the impacts to two drainage ditches and an intermittent stream.
- **NPDES Permit** – A National Pollution Discharge Elimination System permit is required for the storm water discharge.
- **Storm Water Construction Permit** – A permit is required for storm water discharges from construction activities for projects that disturb one acre of land or more. A Notice of Intent for Construction Activity will be submitted to the Idaho Department of Environmental Quality prior to the beginning of construction. A Storm Water Pollution Prevention Plan will be prepared to identify the best management practices to be used to prevent surface water and groundwater pollution.
- **Water Quality and 401 Certification** – Because of the required federal permits dealing with the discharge of pollutants into waters of the U.S., the proposed project also requires a certification of compliance with state water quality standards and other aquatic protection laws from the Idaho Department of Environmental Quality.

3.18 CONSTRUCTION IMPACTS



3.18.1 Environmental Consequences

No-action Alternative

Under the No-action Alternative, there would be no construction and therefore, no construction impacts.

Preferred Alternative

Direct Impacts

Land Use

Temporary construction easements will be required in the planned park near the Snake River Avenue/Southway intersection.

Mitigation

- Since this project involves the conversion of a minor amount of Kiwanis Park (a Section 6(f) property) to replace lost off-street parking for the nearby businesses, additional land south of Kiwanis Park along the Snake River, equal in acreage to that intended to replace the off-street parking, will be committed to public outdoor recreation use.

- Landscaping will be provided in connection with the infiltration basins compatible with the surrounding park area.

Economic

Most businesses will experience temporary inconveniences due to dust, noise, and traffic associated with roadway construction.

Mitigation

- At least one lane of traffic each direction will be maintained through the project area during construction for general public and emergency vehicle use. Access to businesses within the project area will be maintained during construction, with appropriate signing indicating access points.

Air Quality

Emissions due to the construction operations for the Preferred Alternative (should a build alternative be selected) will be mitigated by implementation of the following best practices measures:

Mitigation

- ITD's BMP on Fugitive Dust Control (2-2) from the current BMP Manual in effect at the time of construction: All reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including but not limited to:
 - Use of Water or Chemicals
 - Application of Dust Suppressants
 - Use of Control Equipment
 - Covering of Trucks
 - Paving
 - Removal of Materials

Noise

The most prevalent construction noise source is equipment powered by internal combustion engines (usually diesel). Noise from equipment likely to be used on this project (tractors, trucks, graders, pile drivers, etc.) will range to about 95 decibels when measured from a distance of 15 meters (50 feet). Construction noise impacts are temporary in nature. Extended noise disruption for normal activities is not anticipated since no one receptor is expected to be exposed to construction noise of long duration.

Mitigation

- ITD's current BMP Manual in effect at the time of construction, which would include low-cost, easy-to-implement measures into project plans and specifications (e.g., equipment muffler requirements, work-hour limits).

Water Quality

Construction requires relocation or reconstruction of some features of the existing storm drain system. During construction, there will be the potential for temporary soil erosion and sediments/siltation impacts.

Mitigation

- Use BMPs in accordance with ITD's current Erosion and Sediment Control Manual in effect at the time of construction.
- Prepare an erosion and sediment control plan for the project.

Vegetation, Wildlife, and Threatened and Endangered Species

Construction activities that may disturb the soil or result in increased discharge of sediment into the Snake River have the potential to impact vegetation and the fish habitat for the threatened and endangered aquatic species.

Mitigation

- The Contractor will also employ ITD's current Erosion and Sediment Control – Best Management Practices for construction activities in effect at the time of construction.
- Follow these National Marine Service conditions of Biological Assessment approval:
 - All spoil sites, borrow pits, riprap, and equipment staging areas will be located in approved and/or permitted areas to avoid or minimize any potential impacts on the water quality of fish habitat.
 - Staging areas, rock and gravel borrow sources, and waste material disposal sites associated with highway construction activities will be located outside riparian reserves and any 100-year floodplain to avoid impacts to salmon and trout habitat, with storage of fuels and other toxicants and/or refueling prohibited in the riparian reserves.
 - A designated refueling area will be established for fuel, oil, and other hazardous materials at least 200 feet away from waterways to insure that accidental spills cannot impact water quality or salmonid habitat, with a spill prevention/contingency plan prepared and made available to IDFG.
 - Sidecasting of road material into the Snake River active channel or its riparian reserve areas will also be prohibited.
- Prior to construction of the Snake River Avenue/ US-12 Dike Bypass intersection, the presence of the black-crowned night-heron will be determined and appropriate construction limitations, if any, will be incorporated into the construction contract.

Cultural Resources

It is national and state policy to preserve, for public use, historical and prehistoric objects such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint.

Mitigation

- The Contractor shall particularly watch for cultural remains such as bone, fire cracked rock, shell or other artifacts during construction.
- Archaeological or historical objects, which may be encountered by the Contractor, shall not be further disturbed.
- The Contractor shall immediately notify the Engineer of any such finds. The Engineer will contact the archaeologist who will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made.
- If the archaeologist determines that the material is to be salvaged, the Engineer may require the Contractor to stop work in the vicinity of the discovery until the salvage is accomplished.

Hazardous Waste

While it is not anticipated that hazardous waste will be encountered during the construction of the project, the possibility exists that hazardous waste will be found during excavation.

Mitigation

- If, during construction, either an underground storage tank, buried drum, other container, contaminated soil, or debris not scheduled for removal under the contract are discovered, the Contractor shall immediately notify the Engineer and no attempt shall be made to excavate, open, or remove said material without written approval. (ITD Standard Specification 107.17 – Environmental Protection)

Invasive Species

Mitigation

- The Contractor will follow ITD's BMP on Preservation of Existing/Natural Vegetation (2-3), which includes minimizing construction impacts on existing vegetation through keeping construction activities and waste out of designated areas and replacing damaged vegetation, and ITD's BMP on Staging and Materials Site Management (2-5), which includes controlling water runoff through various methods, proper disposal of hazardous materials, and covers over staging areas and materials to prevent storm water contamination and movement due to wind or runoff.

Indirect Impacts

There will be no indirect construction impacts from the Preferred Alternative.

3.19 CUMULATIVE IMPACTS

3.19.1 Methodology

The Council on Environmental Quality regulations require the assessment of cumulative impacts in the decision-making process for Federal projects. Cumulative impacts result from incremental impacts of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over time. If an individual project has no direct or indirect effects upon a resource, then it also has no cumulative effects upon that resource. The cumulative impacts analysis focuses on resources that are important and relevant.

Cumulative Impact - 40 CFR 1508.7

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Impacts for this project are identified in the following areas:

- Land Use – parks and planned parks
- Economic – removal of on-street parking and defined driveways
- Water Quality – storm drainage system
- Wetlands – replacement of drainage ditches (jurisdictional waters of the U.S.) with storm sewer and modification of intermittent stream
- Cultural Resources – impacts to historic properties by replacing railroad crossing.

For planning purposes, Lewiston has identified seven neighborhood areas within the city. This project lies basically within Neighborhood Number Two - Normal Hill, which is bounded on the north by the Clearwater River, on the west by the Snake River, on the east by 21st Street, and on the south by 25th Avenue. See Figure 3-2. The Normal Hill area is the geographic area addressed in this cumulative impacts analysis. The time frame of the analysis is from pioneer settlement of the area through the most recent planning period of 2030.

3.19.2 Past Actions

Since the founding of Lewiston in 1861, this area has been fully developed over the years, which includes the central business district and other commercial developments, light industrial developments, residential areas, parks and recreation facilities, public schools and the Lewis-Clark State College, and streets. The land adjacent to the Snake River has been entirely disturbed, either by commercial/industrial development or the construction of levees in conjunction with the dams on the Snake River that facilitated the Port of Lewiston.

Major highway facilities that have been constructed in the area include US-12 (including a bridge over the Snake River), Bryden Canyon Road, and the Southway Bridge over the Snake River. Railroad tracks run through the area and include a bridge over the Snake River.

3.19.3 Future Actions

Planned future projects in the area are limited, probably related to the developed nature of this area of Lewiston. ITD's Long Range Capital Improvement and Preservation Program (planning for the next 16 years – 2023) and Statewide Transportation Improvement Program (projects to be constructed in 2006-2010) do not show any ITD projects planned within this area. The Lewis-Clark Valley Metropolitan Planning Organization program for 2006-2010, in addition to this project, shows one project:

- US-12, Dike Route/Bypass, MP 0.3 – 1.8 – Pavement Rehabilitation

Lewiston plans to develop a park along the riverfront between Southway and Bryden Canyon Road. Additional improvements are planned for the Lewiston storm drainage system beyond that included in this project.

3.19.4 Cumulative Impacts

Land Use

The project will use a small amount of the planned park along the Snake River waterfront. There are fourteen city parks and recreational facilities that currently exist in the Normal Hill neighborhood. Impacts to these and other parks from previous actions are not known. Because of the stable nature of this developed area, it can be anticipated that impacts from development will be minimal and that the cumulative impacts will not be significant.

Economic

The proposed project eliminates some on-street parking and limits business driveway openings with curb and gutter. Similar past actions have occurred as Lewiston's development has required pavement to be used to accommodate traffic demand and safety has made driveway width limitations desirable. The off-street parking being provided by this project reduces the impact. The cumulative economic impact is not significant.

Water Quality

The widening of Snake River Avenue and Southway will increase the amount of impervious surface, which will increase the amount of storm water runoff. The project changes storm water from mostly untreated runoff to placing the runoff into a storm sewer system that removes sediments through the use of infiltration basins. An existing storm sewer that serves an 882 acre drainage basin in Lewiston will also be routed through an infiltration basin. The treatment of the storm water will improve the water quality of the storm water runoff. Lewiston plans additional storm drainage system

improvements that would improve water quality. The cumulative impact of the current project and from known future projects will be a positive impact.

Wetlands

There are no wetland impacts with the project, but the project impacts an intermittent stream and two drainage ditches adjacent to the roadway that are considered jurisdictional waters of the U.S. The few natural streams in this area near the confluence of the Snake and Clearwater Rivers have been impacted by past development. No impacts to natural streams are anticipated by future projects; the impact of widening the roadway over the intermittent stream near Bryden Canyon Road will not result in a significant cumulative impact. The additional impervious surface, conversion of the drainage ditches to storm sewers, and any future storm sewer improvements, will not have a significant cumulative impact on the waters of the U.S.

Vegetation, Wildlife, and Threatened and Endangered Species

The Snake River is home to several species of threatened and endangered fish; therefore, these aquatic species would also be impacted by any impacts to water quality. The cumulative impacts analysis for water quality issues would also apply to the protection of the habitat for the threatened and endangered fish.

Cultural Resources

Two historic properties are adjacent to the project on Snake River Avenue. The project has been designed to avoid impacts these structures. Past actions have created the structures that are now classified as historic resources and have probably had an impact on historic structures as the city has grown and developed. There are no impacts anticipated by identified future projects. The impact of this project, when added to past actions, does not result in a significant cumulative impact.

3.20 CONTEXT SENSITIVE DESIGN

Context Sensitive Design (CSD) principles were used on the project to guide the design process. A citizen's advisory committee, a public open-house, meetings with resource agencies, and involvement of the technical staff served to identify the project context – the issues that were important on this project. One challenging issue that surfaced was the importance of the businesses on the east side of Snake River Avenue – from both a historic and a business context – and the Northern Pacific Railroad Spur and Kiwanis Park on the west side of Snake River Avenue. Most of the design alternatives that were considered required the relocation of the railroad or would impact businesses, including historic structures. The preferred design alternative was developed with reduced lane widths and no shoulders to avoid impacts to both the railroad track and the historic structures.

Context Sensitive Design

Context Sensitive Design (CSD) is the art of creating public works projects that meet the needs of the users, the neighboring communities, and the environment. It integrates projects into the context or setting in a sensitive manner through careful planning, consideration of different perspectives, and tailoring designs to particular project circumstances. The early involvement of key stakeholders to ensure that transportation projects are not only safe and efficient, but also are in harmony with the natural, social, economic, and cultural environment.

Threatened and endangered species was an issue that led to the design of an infiltration basin to serve the Southway Storm Drain. This storm drain, which serves an 882 acre drainage basin in Lewiston, discharges directly into the Snake River. An infiltration basin is incorporated into the design, which not only removes sediments from the roadway drainage, but also removes the sediments from the existing storm sewer by routing at least the initial storm flows through the infiltration basin.

The removal of on-street parking from Snake River Avenue raised concerns of both the adjacent business and those using Kiwanis Park. Anecdotal evidence also indicated that there is a shortage of parking near the park facilities. To address these issues, additional parking will be provided within Kiwanis Park to serve the needs of park visitors and replace on-street parking during business hours.

3.21 SUMMARY OF MITIGATION AND OTHER SUCH COMMITMENTS

Land Use

- Since this project involves the conversion of a minor amount of Kiwanis Park (a Section 6(f) property) to replace lost off-street parking for the nearby businesses, additional land south of Kiwanis Park along the Snake River, equal in acreage to that intended to replace the off-street parking, will be committed to public outdoor recreation use.
- Landscaping will be provided in connection with the infiltration basins compatible with the surrounding park area.

Water Quality

To minimize storm water impacts to receiving waters, the following actions will be taken:

- The storm water from the roadway will be routed to one of three storm sewers: North Snake River, Southway and Country Club Drive Storm Sewers.
- Two infiltration basins will be constructed, one near Southway that will include a diversion structure to divert the initial storm runoff during a weather event and one near Country Club Drive.
- A Storm Water Pollution Prevention Plan (SWPPP) will be developed and incorporated into the final design plans of the project and a Notice of Intent (NOI) form will be submitted prior to construction of the project.
- Short-term impacts to water quality will be minimized through implementation of ITD's Best Management Practices (BMP) from the Erosion and Sediment Control

Wetlands

- A Section 404 Permit is required for the impacts to the two drainage ditches and the intermittent stream.

Vegetation, Wildlife, and Threatened & Endangered Species

- Construct two infiltration basins with a diversion structure adjacent to Snake River Avenue.
- The Contractor will also employ ITD's current Erosion and Sediment Control – Best Management Practices for construction activities in effect at the time of construction.
- The Contractor shall follow the National Marine Service conditions of the Biological Assessment approval, as follows:
 - All spoil sites, borrow pits, riprap, and equipment staging areas will be located in approved and/or permitted areas to avoid or minimize any potential impacts on the water quality of fish habitat.
 - Staging areas, rock and gravel borrow sources, and waste material disposal sites associated with highway construction activities will be located outside riparian reserves and any 100-year floodplain to avoid impacts to salmon and trout habitat, with storage of fuels and other toxicants and/or refueling prohibited in the riparian reserves.
 - A designated refueling area will be established for fuel, oil, and other hazardous materials at least 200 feet away from waterways to insure that accidental spills cannot impact water quality or salmonid habitat, with a spill prevention/contingency plan prepared and made available to IDFG.
 - Sidecasting of road material into the Snake River active channel or its riparian reserve areas will also be prohibited.
- Prior to construction of the Snake River Avenue/ US-12 Dike Bypass intersection, the presence of the black-crowned night-heron will be determined and appropriate construction limitations, if any, will be incorporated into the construction contract.

Cultural Resources

- The Contractor shall particularly watch for cultural remains such as bone, fire cracked rock, shell or other artifacts during construction.
- Archaeological or historical objects, which may be encountered by the Contractor, shall not be further disturbed.
- The Contractor shall immediately notify the Engineer of any such finds. The Engineer will contact the archaeologist who will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made.
- If the archaeologist determines that the material is to be salvaged, the Engineer may require the Contractor to stop work in the vicinity of the discovery until the salvage is accomplished.

Permits

- **Section 404 Permit** – A Section 404 permit is required for the impacts to two drainage ditches and an intermittent stream.
- **NPDES Permit** – A National Pollution Discharge Elimination System permit is required for the storm water discharge.

- **Storm Water Construction Permit** – A permit is required for storm water discharges from construction activities for projects that disturb one acre of land or more. A Notice of Intent for Construction Activity will be submitted to the EPA prior to the beginning of construction. A Storm Water Pollution Prevention Plan will be prepared to identify the best management practices to be used to prevent surface water and groundwater pollution.
- **Water Quality and 401 Certification** – Because of the required federal permits dealing with the discharge of pollutants into waters of the U.S., the proposed project also requires a certification of compliance with state water quality standards and other aquatic protection laws from the Idaho Department of Environmental Quality.

Construction Impacts

Land Use

- Temporary construction easements are required in the planned park near the Snake River Avenue/Southway intersection.

Economic

- At least one lane of traffic each direction will be maintained through the project area during construction for general public and emergency vehicle use. Access to businesses within the project area will be maintained during construction with appropriate signing indicating access points.

Air Quality

- ITD's BMP on Fugitive Dust Control (2-2) from ITD's current BMP Manual in effect at the time of construction: Precautions shall be taken to prevent particulate matter from becoming airborne, including but not limited to:
 - Use of Water or Chemicals
 - Application of Dust Suppressants
 - Use of Control Equipment
 - Covering of Trucks
 - Paving
 - Removal of Materials

Noise

- ITD's current BMP Manual in effect at the time of construction, which would include low-cost, easy-to-implement measures into project plans and specifications (e.g., equipment muffler requirements, work-hour limits).

Water Quality

- Use BMPs in accordance with ITD's current Erosion and Sediment Control Manual in effect at the time of construction.
- Prepare an erosion and sediment control plan for the project.

Vegetation, Wildlife, and Threatened and Endangered Species

- The Contractor will also employ ITD's current Erosion and Sediment Control – Best Management Practices for construction activities in effect at the time of construction.
- The Contractor shall follow the National Marine Service conditions of the Biological Assessment approval, as follows:
 - All spoil sites, borrow pits, riprap, and equipment staging areas will be located in approved and/or permitted areas to avoid or minimize any potential impacts on the water quality of fish habitat.
 - Staging areas, rock and gravel borrow sources, and waste material disposal sites associated with highway construction activities will be located outside riparian reserves and any 100-year floodplain to avoid impacts to salmon and trout habitat, with storage of fuels and other toxicants and/or refueling prohibited in the riparian reserves.
 - A designated refueling area will be established for fuel, oil, and other hazardous materials at least 200 feet away from waterways to insure that accidental spills cannot impact water quality or salmonid habitat, with a spill prevention/contingency plan prepared and made available to IDFG.
 - Sidecasting of road material into the Snake River active channel or its riparian reserve areas will also be prohibited.
- Prior to construction of the Snake River Avenue/ US-12 Dike Bypass intersection, the presence of the black-crowned night-heron will be determined and appropriate construction limitations, if any, will be incorporated into the construction contract.

Cultural Resources

- The Contractor shall particularly watch for cultural remains such as bone, fire cracked rock, shell or other artifacts during construction.
- Archaeological or historical objects, which may be encountered by the Contractor, shall not be further disturbed.
- The Contractor shall immediately notify the Engineer of any such finds. The Engineer will contact the archaeologist who will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made.
- If the archaeologist determines that the material is to be salvaged, the Engineer may require the Contractor to stop work in the vicinity of the discovery until the salvage is accomplished.

Hazardous Waste

- If, during construction, either an underground storage tank, buried drum, other container, contaminated soil, or debris not scheduled for removal under the

contract are discovered, the Contractor shall immediately notify the Engineer and no attempt shall be made to excavate, open, or remove said material without written approval. (ITD Standard Specification 107.17 – Environmental Protection)

Invasive Species

- The Contractor will follow ITD's BMP on Preservation of Existing/Natural Vegetation (2-3), which includes minimizing construction impacts on existing vegetation through keeping construction activities and waste out of designated areas and replacing damaged vegetation, and ITD's BMP on Staging and Materials Site Management (2-5), which includes controlling water runoff through various methods, proper disposal of hazardous materials, and covers over staging areas and materials to prevent storm water contamination and movement due to wind or runoff.